HYGEIA

THE HEALTH MAGAZINE

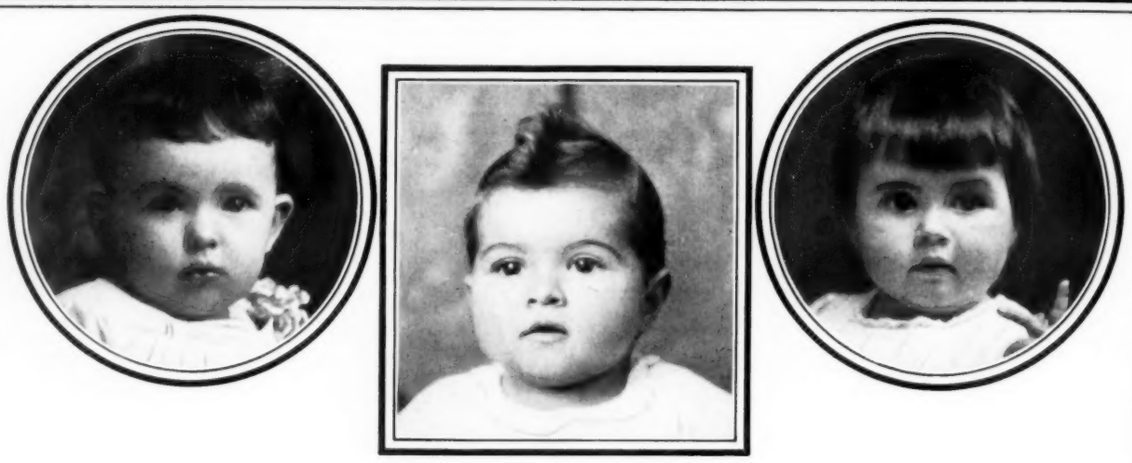
Published by the American Medical Association

Improving the Complexion

Dreams

Do Poor People Like Bad Housing?

April, 1927 *25 Cents*



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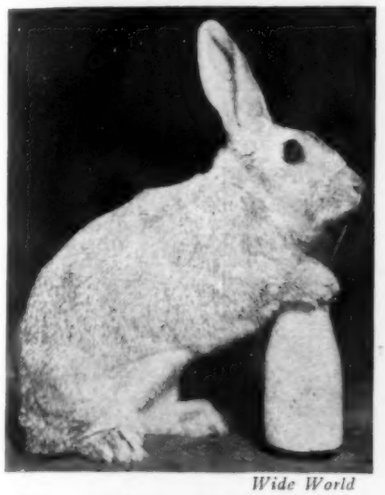

Wide World

The modern Easter bunny takes his milk through a straw.

PERCY G. STILES of the Harvard Medical School has been collecting material on the interesting subject of dreams for the last thirty years. ERNEST S. CLOWES is a free lance writer. DR. FREDERIC DAMRAU, a former contributor to HYGEIA, specializes in nervous and mental diseases.

JAMES A. TOBEY is a scientific consultant and was formerly associated with the government bureau of research at Washington, D. C. SCOTT E. W. BEDFORD is research secretary for the United Charities of Chicago.

DR. FRED H. ALBEE is a well known orthopedic surgeon. The illustrations for his article are from his book "Orthopedic and Reconstruction Surgery" and are reproduced here through the courtesy of the publishers, W. B. Saunders Company. DR. FRANK HOWARD RICHARDSON, author of a number of books on child training, continues his series on the nervous child.

DR. JOHN H. J. UPHAM is professor of medicine at Ohio State University college of medicine. GRACE MARIAN SMITH is a specialist in home economics. ELIZABETH CHAPMAN is a writer of popular articles.

DR. L. D. HUBBARD of St. Elizabeth's Hospital, a government institution for mental diseases, is a frequent contributor to HYGEIA. JESSIE I. LUMMIS is executive secretary of the Denver Tuberculosis Society.

HEADLINERS in the May HYGEIA include these three articles of interest to every one:

CHEEKS OF TAN (an article on the value of sunshine)
By Dr. Charles Sheard

CORRECTING FOOT TROUBLES
By Dr. Alice L. Goetz

WHO IS YOUR DOCTOR?
By Dr. William E. Musgrave

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Contributions to HYGEIA are considered, and, if accepted, paid for on publication. Stamps for the return of unaccepted manuscripts should be enclosed. All communications should be addressed to HYGEIA, 535 North Dearborn Street, Chicago, Illinois.

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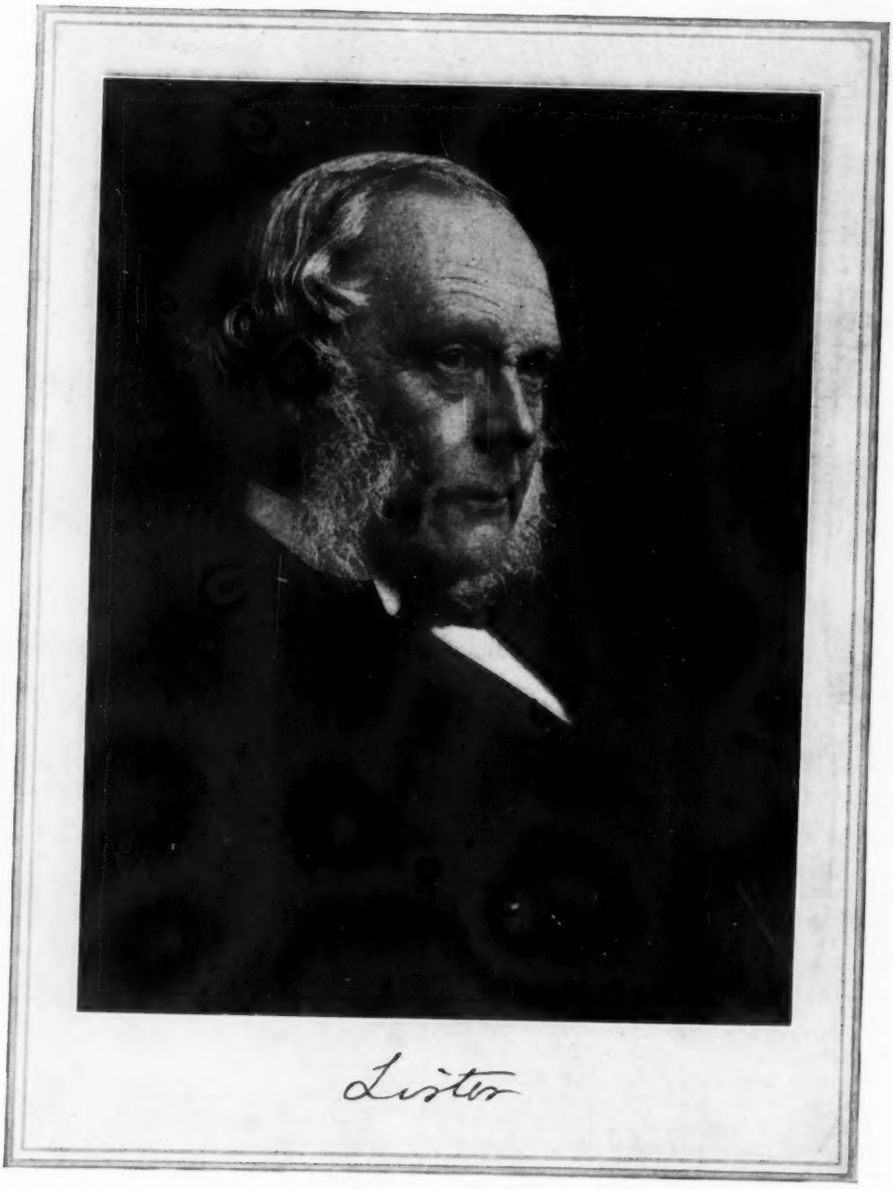


HEROES OF MEDICINE

XIII. Joseph Jackson Lister

(See page 193)

By Percy G. Stiles

THE brain machinery is multifarious beyond imagination. Pronounced activity in one set of parts probably implies reduced employment of many other elements. The events in consciousness seem few compared with the vast number of cooperating cells and fibers. Perhaps the emergence of a picture in waking or dreaming may be likened to the attaining of a total on an adding machine. There are the figures but when we take note of them it is with no adequate appreciation of the hidden processes that have determined their appearance.

A man is obviously awake when his sense organs are in full use and he is either reacting in a purposeful way to his environment or becoming adjusted to do so at a future time. To all intents and purposes he is asleep when the sensory activities have become partial and irregular, when there is no present reaction to the environment or orderly preparation for a later one.

Dream Life Is a Vacation

The conscious phenomena of such a period are dreams. They correspond with an indiscriminate play of the brain mechanisms, a temporary escape from discipline. The dream life is, accordingly, a kind of vacation in which useful enterprises are abandoned in favor of aimless indulgences. This conception is clearly consistent with the recuperative service of sleep.

The higher activities of the brain may be compared with the shifting patterns of an electric sign. Numerous bulbs are lighted in a systematic manner and the next moment they are darkened while those of a new group shine forth. If we undertake to illustrate waking and dreaming in these terms we must picture the signboard that stands for the dreaming brain as being operated by faulty sets of switches. Its characters are jumbled and bewildering. Many of its bulbs are bright when they seem out of place in the picture, many others are missing and their absence gives an impression of incompleteness.

Dreams and Health Are Related

All people probably dream, though it is evident that the power to recall dreams is a most unequal endowment. It can be cultivated in some degree but only if the waking can be unhurried by the pressure of daily duties. Few are so luxuriously circumstanced that the ideal can be fulfilled. Even though the memory of our dreams may be quite indefinite we can usually answer a certain important question in respect to their character. This is the following: Have the dreams been concerned with present and pressing anxieties and interests or have they seemed remote from these? The reply has a possible bearing on our health and outlook.

Nervous fatigue is often characterized by a difficulty in detaching ourselves from a tyrannizing interest. Such fatigue may be held to exist when the interest is not automatically relinquished on going to sleep. Its continuance in dreams implies that rest is denied to the very departments of the nervous system that stand particularly in need of it. If healthful dreaming has in any degree the virtue of a vacation, this perversion of the mental life

appears by contrast as damaging overtime. A warning is sounded to lighten the stress if possible or, failing that, to establish new interests that shall make for a balanced life.

It may happen that the anxiety disturbing happiness and threatening health enters the dreaming consciousness in disguise. The haunting fear or the irksome duty may not be recognized as it figures in the fantastic allegories of the night. But there will still be a similarity between the emotion of the dream and that of the waking mood. It might require an expert in psychanalysis to interpret the action but the temperamental coloring may be suggestive to any one.

Havelock Ellis has convincingly pointed out that one of the most marked tendencies of the dreamer is to set off parts of himself and view them as though they belonged to others. When he is stimulated in a manner that might be expected to produce pain he does not think that he suffers. Instead he sees some one else in trouble. If his heart palpitates he watches some sort of struggle; perhaps he follows the efforts of a swimmer to stem a swift current. Obstruction of the nose has been symbolized by a fish out of water and so unable to breathe. A headache, which was found on waking to be quite severe, was presented in sleep as a massive door tightly closed.

Dreams Often Do Go by Contraries

There is some truth in the old saying that dreams go by contraries. Concentration on the day's work should stand contrasted with a harmless dissipation of attention in the realm of dreams. There is ground for comfort here for sensitive individuals who are inclined to blame themselves for some of the features of their dreaming experience. A man may be disconcerted to observe that in dreams he stoops to deceit or exhibits a gross want of dignity. But it is the best of us that goes to sleep most soundly.

The highest principles by which conduct is governed have been attained by the race only in recent ages. They have been appropriated by each of us with a definite output of effort. Our sleep sets us back toward childhood. The powers lately acquired are the ones that fall into abeyance. Perhaps we may maintain that their temporary paralysis is the direct result of their previous exercise. It then appears to our credit rather than the reverse.

The expression of sex interest in dreams is closely related to what has been said. People have reproached themselves unsparingly because they have been compelled to recognize its obtrusion. The demonstration that it is commonly present in disguise even when it is not frankly displayed must deepen their chagrin.

Yet here again there is ample reason to assert that the impulse that defies control in dreaming has been admirably regulated in waking life. It may well be that the offending motif would be found significantly absent from the dreams of the vicious. There may be a correlation between the license of the dream and the habitual exercise of self-denial. A capacity exhausted in waking hours would be unlikely to appear in a dream.

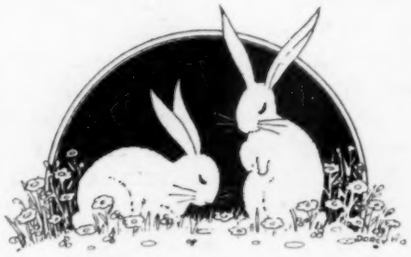
Only Unsolved Problems Appear

There may seem to be some inconsistency between two ideas that have been presented. I have said that fatigue, associated with an engrossing interest, may cause that very theme to be undesirably prominent in dreams. And then I have declared that the free indulgence of a propensity may exclude it from dream life. It may be found possible to reconcile the two in accordance with the following principle. The trains of thought that are continued from waking into dreaming are connected with problems that have not been carried to a solution. They keep recurring in different guises, challenging and baffling the resources. To this class belong anxieties, projects and unsatisfied tendencies of every kind.

On the other hand those passages that are definitely concluded in waking are far less likely to invade sleep. A need that has been relieved, an enterprise that has become an accomplished fact, any incident that is undeniably closed—these drop out of the consciousness of the dreamer and the nerve machinery that they have exercised is granted rest.

This seems logical and beneficent. The great calamities of life may be mercifully withdrawn from the field of attention. About a supreme grief there is a finality that disposes to inertia. A responsibility is ended, there is nothing to be done, and with the slackening of the tension comes dreamless sleep or a sleep traversed by dreams that are trivial and irrelevant. Recorded in touching language in the second book of Samuel is the story of David's agony while his child lay dying and the equanimity with which he presently accepted the fact of death.

So in our dreams the undecided issues dominate and drive, while those that are of the past, momentous as they may have been, make but a minor impress on the scene.



We Like Greens

By Ernest S. Clowes

Celery grows by the mile in California.

THE United States is becoming a nation of eaters of greens. The campaign of education as to the value of vitamins has borne fruit in thousands of acres devoted to the raising of succulent green vegetables in which some of the most vital of these necessities of diet are found.

In contrast to the days when we subsisted largely on beef, bread and potatoes and when the farm patch of "garden sass" was a trifling job left mostly to the women, the nation's garden patch is now an essential and a considerable part of the national farm. We eat more lettuce and spinach in winter and less sulphur and molasses in spring than in grandfather's day.

The area now devoted to the growing of green vegetables for the table, including melons, cantaloups and strawberries, amounts, according to the latest figures of the Department of Agriculture, to approximately 1,148,770 acres, or a little under 1,800 square miles. If the area that is put to the growing of the same vegetables for canning is added, the total is nearly doubled.

The lower figures are impressive enough. They account for an area larger than all Long Island, half as big again as the state of Rhode Island, and nearly as large as Delaware. It is an area that has been steadily growing in recent years. The increase in 1926 over the preceding year was approximately 100,000 acres. And this, be it remembered, is merely for the commercial crop. What the total area of all the little garden patches throughout the country whose products are consumed at home would amount to it is impossible to say.

The increase in the planting of greens in recent years has been the most impressive in asparagus, cauliflower, lettuce, peas and spinach.

Photos by Ewing Galloway

Harvesting string beans on reclaimed swamp land in Florida.

In two years the acreage of lettuce and spinach, favorites of the vitamin hunter, has increased more than 50 per cent. Last year some 106,000 acres were planted to lettuce alone. This would suffice to give a patch some 6 or 7 feet square to every inhabitant of this land, enough to provide some 75 good heads, or more than one a week for everybody.

The cauliflower acreage jumped from 13,000 acres in 1924 to 22,500 acres in 1926, but that of its more humble relative, the cabbage, exceeded it almost exactly fivefold. The acreage of cabbage, amounting to 112,580, is in fact exceeded only by that of tomatoes and melons in Uncle Sam's garden patch. The total area devoted to these two crops for commercial purposes is larger than that of all Greater New York.

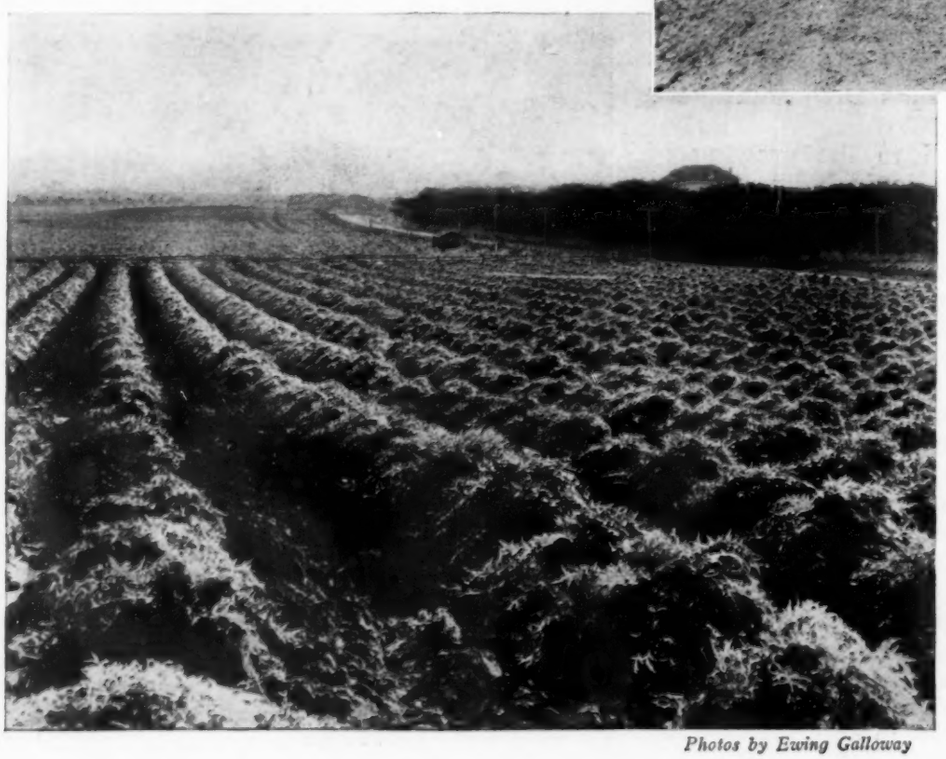
Spinach has risen from a term of derision to a place on physicians' prescriptions and the result is seen in 37,000 acres devoted to its culture in 1926, as compared to less than 25,000 two years before. This little spinach bed would cover more than 50 square miles. The total value of last year's crop amounted to more than $6,000,000.

Carrots have been highly commended as an adjunct to the diet, and as a result the area now devoted to their growth is greater than that of Manhattan Island, an increase of nearly 50 per cent in two years. Green peppers have shown a similar increase.

String or snap beans are one of the greatest popular favorites, their popularity having endured so long that the culture of the plant shows only small increase as compared to the more recent aspirants for favor. Nevertheless the snappy bean can rest content, for he and his family occupied some 65,000 acres of the nation's farm last year, a patch a little more than equal to 100 square miles. Celery is another old favorite that showed only a moderate increase in production.

Uncle Sam's melon patch would seem big enough to provide for all his nephews a chance for a midnight raid without materially reducing the supply. Approximately 300 square miles of watermelons and 160 square miles of cantaloups were grown for market last year.

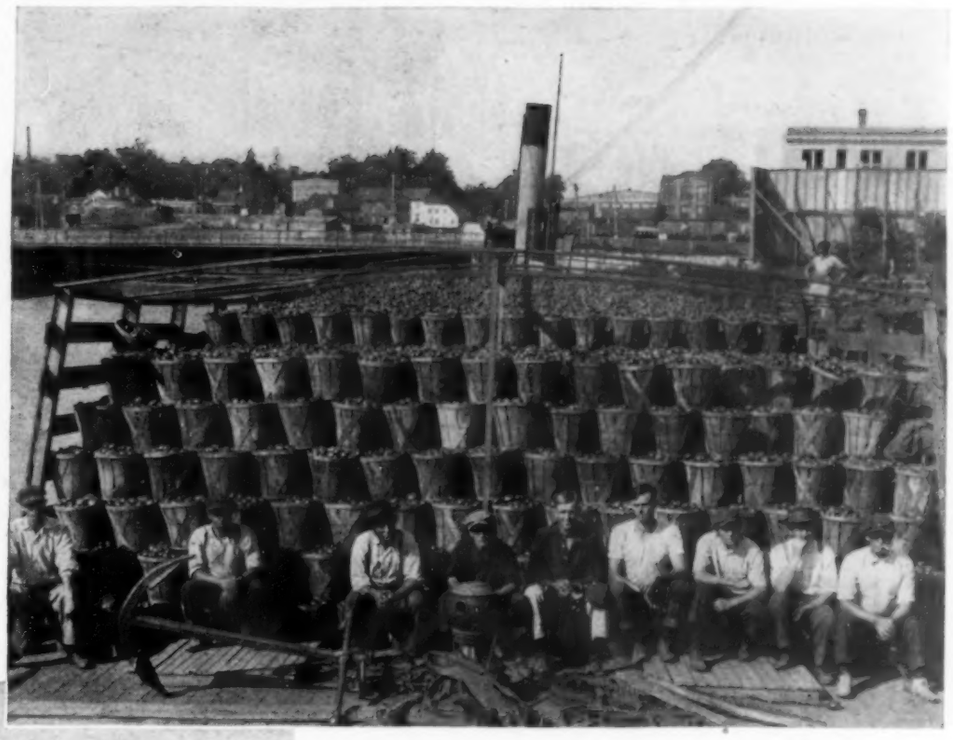
All these figures have been for vegetables or fruit to be eaten green and fresh on the table. The figures for similar products raised for canning would be too tedious to enumerate, but when the totals of all the green products are added the acreage amounts to some 2,100,000.



A one-horse cart takes these harvested asparagus tips from the ridges to the ranch packing house.

Another California crop is shown at the left, a fine field of artichoke.

Photos by Ewing Galloway



A barge laden with luscious tomatoes from the truck farms of Delaware Bay.

Below is a section of an onion crop. Intensive cultivation and frequent fertilization enable this land to produce two crops of truck every year.

Photos by Ewing Galloway

This is really the full size of the nation's kitchen garden, exclusive of the potato patch. It provides all the green vegetables we eat throughout the year as well as the melons, strawberries and onions. It is about as big as Rhode Island and Delaware together.

It is significant that the increase in the size of this garden patch is mostly in the sections devoted to the raising of products to be served fresh. The area devoted to the growing of vegetables for canning shows little if any increase, the tendency in peas being toward a great consumption of the fresh vegetable and a smaller use of the canned product. This is partly the result of the propaganda in favor of fresh vegetables and partly of the improved economic condition of the American people and of their greater ability and willingness to buy what used to be considered mere luxuries. Even the humble tearoom now serves fresh vegetables all winter as part of a 75 cent or dollar table d'hôte meal.

The increase has also been due to the greater use of refrigeration on the railroads, bringing into cultivation large areas in the south and west remote from the great centers of population.

For example, the figures show that while New Jersey still holds its place as the great asparagus state, second place is held by California. California produces more than half of all the lettuce of the country, and more than half of the cauliflower. It is third in the production of cantaloups.

But although California might be termed the great winter vitamin factory of the United States, other states do their share. Florida leads in early tomatoes and string beans. Texas excels in spinach; Georgia in watermelons; Louisiana in early carrots.

Nearly all the southern states show large increases in the production of these green crops, an impressive example of the way science serves mankind. The sun is the life-giver of the race. Not only the direct rays but products of the rays formed by Nature's chemistry in the cells of growing plants have been shown to possess peculiar vital properties for the human race. Science has not only shown this but has, working along other lines, shown how it is possible to bring these products of the warm sunshine into the cold, cloudy northern winter climes; and perhaps more wonderful still it has shown us how we may enable the average man to earn enough money to buy these products from afar.

Improving the Complexion

By
Frederic Damrau

Pure pathos: The school girl looks sadly at her mottled complexion.

ONE of the most amazing things observed in the practice of medicine is how philosophically people will bear up under an incapacitating illness or even one that threatens life, whereas the moment they suffer from a relatively trivial ailment affecting their personal appearance, they are distressed beyond measure. A physician once remarked that acne, meaning pimples on the face, probably causes more mental distress than cancer, and his statement is not without justification.

Few serious diseases so completely upset the mental equilibrium of the flappers and the collegiates as ordinary acne. For pure pathos, one has but to recall the school girl looking sadly at her mottled complexion in the mirror of the slot machine and then glancing enviously at the billboard picture of the woman with "that school girl complexion."

A clear complexion is one of the greatest aids to successful courtship, but nature frequently has an ironical trick of blocking romances at the very age when they are most in vogue. And the bad complexion is the barrier. No wonder the young folk are inclined to take a few pimples so seriously, for who could think of the romantic John Gilbert or the angelic Lillian Gish as having a single facial blemish?

The tragic thing about the pimple is that it breaks out ruthlessly on the most conspicuous part of the body and at an age when every one is extremely anxious to look his best. The bald man may not be handsome, but he can at least wear a hat; whereas the pimply face is necessarily thrust into plain view of all. Besides, the bald man is usually older and has already won his mate; but the person with pimples has usually still to woo or be wooed.

A bad complexion is often a serious disadvantage in seeking employment. Many people have vague suspicions with reference to the causes of facial eruptions and seem loath to offer responsible positions to those thus afflicted. They frequently mention indefinite expressions, such as "bad blood," as their idea of the causes of the trouble. In any event, they seem inclined to withhold their social and business favor from persons with bad complexions.

The young fellow or girl with facial eruptions does not need to be told his complexion is a distinct handicap both in love and business; he has already found that out for himself. The realization of his own shortcomings in this respect gives him a sense of inferiority that is fatal to success. If he could rub Aladdin's lamp, his one wish would be for "the skin you love to touch."

Sweets aggravate skin eruptions.

To understand the nature of a pimple, it is necessary to consider the little gland from which it arises. The human skin, like leather, must have oil; for this purpose the skin is studded with glands that secrete skin oil, namely, the sebaceous glands.

"Spare the soap and ruin the skin" should be the motto of the pimpled.

THE tragic thing about a pimple is that it breaks out ruthlessly on the most conspicuous part of the body at an age when every one is extremely anxious to look his best.

Every pimple arises from a sebaceous gland. The first stage of the disturbance is an excessive secretion on the part of these glands, as a result of which the skin becomes oily. Then the overactive sebaceous glands become clogged as a result of the retention of their skin oil. This secretion hardens and becomes coated on the surface with dust from the atmosphere, forming a blackhead, or comedo.

Essentially a pimple is an infected comedo. The skin is always covered with microbes, especially staphylococci, those little dot-shaped germs that arrange themselves in clusters like bunches of grapes. The skin follicle, already distended by dried skin oil and the broken down cells constituting its lining, is unable to resist the invasion of the staphylococci, with the result that it becomes inflamed and finally a tiny abscess forms.

It is important to recognize the fact that the pimple itself is due to infection. For this reason, it is unsafe to use the same towels as a person with acne; but, as a matter of fact, it is not easy to spread the infection to the healthy skin by the towel. Apparently the soil must be prepared for the infection; that is, the skin with the overactive sebaceous glands, resulting in the formation of comedones, is the one on which pimples are prone to develop. If the sebaceous glands are not overactive, pimples are rare.

The person with pimples is more likely to reinfect himself than to infect others. Being self-conscious, he is apt to have a habit of fingering the eruptions and then touching the healthier areas of his skin. In this manner the eruptions are spread from one place to another. It is important for the person with pimples to avoid fingering his face, because of the fact that his skin with its overactive sebaceous glands is especially prone to infection.

The underlying cause of the bad complexion is the disturbance responsible for the overactivity of the little sebaceous glands. What causes the tiny skin glands to secrete an excess of oil? In other words, what is the real cause of the broken-out complexion?

The most important cause is undoubtedly youth. At the age of adolescence many of the glands of the body are disturbed in their equilibrium and likely to be overactive. The sebaceous glands are not an exception to the general rule.

The most consoling thing about pimples is that they seldom persist after the age of 30. Several years ago, I made that remark to a despondent young man. But he replied, "Who cares about what happens when he's 30? I'll be an old man then!"

Living an outdoor life helps.

The eating habits of youth probably play some part in causing an outbreak of facial eruptions. Adolescence is indeed the candy age; the young folk are too inclined to feast on candy and sweets and forget about the other ingredients of the balanced diet.

It is probable that an excess of starches and sugars

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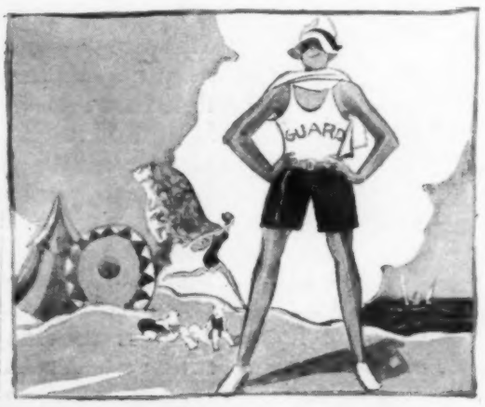

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The most important cause is undoubtedly youth. At the age of adolescence many of the glands of the body are disturbed in their equilibrium and likely to be overactive. The sebaceous glands are not an exception to the general rule.

The most consoling thing about pimples is that they seldom persist after the age of 30. Several years ago, I made that remark to a despondent young man. But he replied, "Who cares about what happens when he's 30? I'll be an old man then!"

The eating habits of youth probably play some part in causing an outbreak of facial eruptions. Adolescence is indeed the candy age; the young folk are too inclined to feast on candy and sweets and forget about the other ingredients of the balanced diet.

It is probable that an excess of starches and sugars

in the diet does not cause acne; however, there is no question but that such habits of eating definitely aggravate the eruptions of this disease. When the amount of sugar contained in the blood is above normal there is a lowering of the resistance of the skin to infection. In the case of acne it has been proved that an increase in the blood sugar is detrimental. The starchy diet tends to increase the blood sugar and thus gives the waiting staphylococcus its chance.

The person who suffers from a bad complexion does well to avoid candy altogether. He should also refrain from eating an excess of the four p's, meaning potatoes, pastry, pie and pudding. In general, fruits and green vegetables in the diet are of value, and hygienic measures that tend to overcome constipation should be followed.

Candy alone will not cause a bad complexion. The most beautiful skin I have ever seen belonged to a girl who would take a thick story book and a 2 pound box of chocolates and finish them both in the same afternoon. It is only when the sebaceous glands are working overtime that candy can damage the complexion.

X-Ray Efficient Remedy

Pimples more commonly affect persons who lead an indoor life than those who spend many hours of the day outdoors. I am inclined to believe that the sun's rays are beneficial to the skin in this respect. I have often noticed that a mild sunburn has a favorable effect on facial eruptions. At first they may appear to be aggravated; but after several exposures the final result is usually beneficial. A violent sunburn, however, is to be avoided.

The ultraviolet rays of the sun, as is well known, increase the vitality of the skin. With this general improvement an otherwise sluggish skin is enabled to put up a successful fight against the germs. Artificial sunlight, too, such as is generated by the large ultraviolet lamps, has a similar beneficial influence.

Unquestionably, a most efficient remedy in the treatment of pimples is the x-ray. Almost with prophetic wisdom, Dr. William Allen Pusey, an American skin specialist of high repute and a former president of the American Medical Association, wrote in 1903: "I think it may be safely said that in roentgen rays (x-rays) we have found a method of treating acne more effective than any hitherto at our command." Dr. Pusey's early enthusiasm for this matter has been justified.

X-rays, or roentgen rays as they are often called, have a restraining action on many of the glands of the body. In the case of the little sebaceous glands of the skin, this check is quite apparent. In cases of acne the sebaceous glands are in a state of riotous activity; the skin oil is secreted in great excess and the cells that line the glands multiply so rapidly as to clog the openings. The roentgen ray, by restraining the secretion of skin oil and the multiplication of lining cells, restores the sebaceous glands to a condition of normality.

Practice has substantiated the theory. The majority of skin specialists are now favorably impressed with the successful and enduring results obtained by treating the skin eruptions with x-rays in carefully regulated dosage. Dr. Howard Fox said: "The roentgen ray has now been used for many years in the treatment of acne. In the hands of a careful operator, using modern apparatus and measured dosage, the roentgen ray is now as safe as it is efficient. The results in the treatment of acne are more permanent than with any other therapeutic agent."

A word of caution is necessary. Every person with acne should not be treated with x-rays. Some patients probably receive greater benefit from the simpler remedies of diet and local applications to the face. In other words, it is bad policy for a person with acne to approach his physician and demand roentgen ray treatment; such a decision is best left to the doctor's judgment.

Local Care of Skin Important

The daily care of the skin is a matter of great importance to the person with pimples on his face. The world is so full of superstitions with regard to the alleged harmful effects of soap and water that it becomes necessary to spread a little favorable propaganda for these highly useful but much decried agents.

Some newspaper column writers have given the impression that famous beauties eschew soap and water as if they were lye and acid. In this respect, they have misled their readers. It has often been my experience to have a flapper whose face loudly proclaimed the need of soap and water overrule me by quoting a beauty writer in a tabloid newspaper.

It is true that some thin dry skins are irritated by the excessive use of strong soap and that an itching, scaly skin may result from no other cause than the too conscientious use of soap and water. But if ever there was a condition in which cleanliness is next to godliness it is that of the skin studded with blackheads and pimples. Here the motto should be, "Spare the soap and ruin the skin."

Every night the face should be washed thoroughly with plenty of soap and warm water; then the soap should be rinsed off, a final cold rinse being of advantage. The purpose of the soap is to cleanse the skin. The best soaps make no further claims.

Health in Frozen Form

By

James A. Tobey

No coaxing is necessary when it comes to consuming the vitamins in ice cream

HAVE you ever heard of frozen heat? As a normal American, you have undoubtedly eaten it and were fired by it with energy and ambition. This may sound paradoxical but it is not. Ice cream is frozen heat and it is one of the most valuable of common American nutriments.

Ice cream is health in frozen form. Its chief ingredients are, or should be, cream and sugar. The carbohydrate contained in ice cream is the substance that permits of the sobriquet "frozen heat." Carbohydrate is the fuel of the body, the element that must be present to burn for energy and activity, along with the protein, vitamins and minerals, which are the necessary components of the well balanced diet.

Athletes have long recognized the advantages of plenty of carbohydrate, and ice cream is one of the desirable sweets that are found at the training table. Hospitals, likewise, make it a regular part of their fare. But ice cream is not merely a food for athletes and invalids; it is for every one, except a small unfortunate minority, such as sufferers from diabetes, who are usually forbidden sugar in any form, and those whose obesity makes it eminently desirable that they abstain from such pleasures.

Until recently ice cream was not looked on as the valuable food that it is. It was somewhat under suspicion and often considered merely as a luxury of questionable effect on the digestive system. When properly made, ice cream is simply a concentrated and, in some ways, a refined form of milk, and milk is the most nearly perfect food in existence. Milk, and consequently ice cream, contains all of the five known vitamins and probably several not yet discovered. It has the calcium and other minerals that contribute to the proper building of teeth and bones; it is well supplied with fat and protein, in addition to the precious carbohydrate.

The heat produced by foods is, as nearly every one knows, measured by units called calories. These calories have not entirely gone out of fashion. The popular vitamins have come only to supplement the older favorite. A good grade of ice cream will produce anywhere from 700 to 1,200 calories or even more per pound, depending on the substances used in its manufacture. Ice cream is, therefore, just as much to be desired in the winter as in the torrid days of summer. In either season, it should be included with the meal and not added after the stomach has already been overcrowded.

Properly eaten, ice cream, in spite of its coldness, has no deleterious effect on the digestive apparatus. By proper eating is meant slow consumption. No food should be taken in a rush; this is especially true of viands that are served unusually hot or cold. So, when properly prepared and properly eaten, ice cream is an auspicious choice at any age, except for very young infants, whose feeding regimen should be under the guidance of a competent physician. Ice cream is one of the most effective means of getting the quart of milk which ought to be in the diet of every child under the age of 21 and which could to advantage be in the diet of all adults. Some persons can tolerate ice cream when milk does not agree with them.

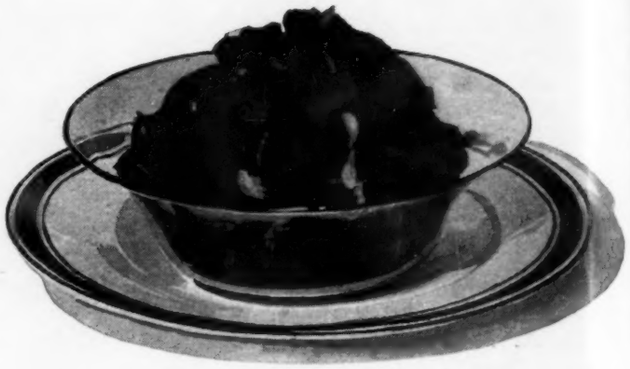
Milk has been aptly called the great protective food, sharing this honor with the green vegetables. It is the one article of food that in itself contains every one of the body building elements. Scientists are in complete agreement on the fact that the vitality of the American people depends in large measure on the amount of milk that is consumed in some form. The milk must, of course, be pure and safe, for there is nothing more potentially dangerous than impure and dirty milk. In making ice cream, especially on a large scale, it is customary to pasteurize the milk first, for no raw milk is absolutely safe. The actual freezing of this prepared milk has no disastrous effect on it and it still contains those essential substances that contribute to growth and strength.

Fruits and flavors added to ice cream usually make it all the more valuable. Pasteurization does not affect vitamins A and B, which are the strength and nerve builders, but it may reduce vitamin C, the antiscorbutic substance. Certain fruits, such as oranges and pineapples, restore this vitamin. Fruits also contribute more carbohydrate, though in a different form from that of the cane sugar which is added. Nuts bring in more protein, while chocolate and other syrups contribute to the nutritional utility of this best of all desserts.

Water Ice a Luxury, Ice Cream a Food

Oranges and lemons are excellent flavors for water ices, as they furnish the desirable vitamin. Water ices are not, however, in a class with ice cream, for they lack the milk and cream. The ice is a real luxury, while ice cream is a real food. The latter is still a food if it has air blown into it, a process favored by some manufacturers in order to give a certain fluffiness.

The making of ice cream is nowadays something of an art. Due regard must be given to its richness and quality, with proper skill accorded to the blending of the various constituents. Furthermore, sanitation is extremely important all the way through the process. The milk and cream used must have come from cows that are clean if not contented and must be drawn by healthy milkers into sterile containers, then shipped under careful conditions. It must then be pasteurized, so that it will be safe as well as clean, for even clean milk will carry the bacteria of disease if the opportunity is presented.



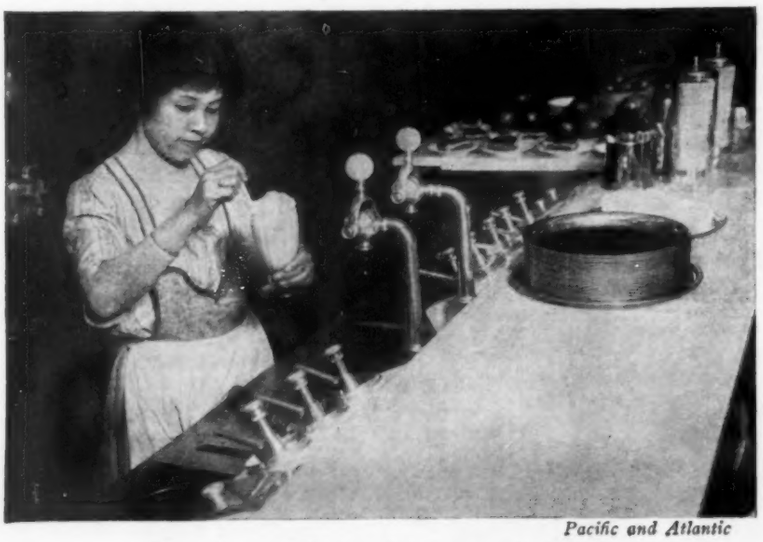
Fruits and flavors added to ice cream usually make it all the more valuable.

Sweetened condensed milk is frequently used in the manufacture of ice cream, because of the purity of this product, as well as its other advantages, such as uniformity, superior digestibility and the fact that it already contains cane sugar. Evaporated milk is sometimes used as a substitute for whole milk.

Proper Making and Handling of Ice Cream

Huge quantities of cream are used in making this frozen heat. After the milk has been rendered safe, it is homogenized, a process that breaks up the fat particles into small and uniformly divided masses, which are much more easily digested than the undivided curds of milk. This procedure is similar in some ways to the effects of the processes of condensing and drying milks, which are known to render them more digestible than the whole fluid milks.

After the proper ingredients have been added and mixed in accordance with recipes and formulas, the product is most carefully frozen. There are all kinds of ingenious devices for regulating freezing conditions, and the ice cream machinery business is really an enormous one. The ice cream industry maintains several trade magazines, which are as thick and voluble every month as the professional journals and the popular fiction magazines. The national association of ice cream manufacturers, which has headquarters at Harrisburg, Pa., is constantly striving through its research council to improve methods of production and



Pacific and Atlantic

They have soda fountains even in Japan.

distribution of ice cream and also to promote its popularity.

The manufacture of ice cream is subject to the constant inspection and control of health authorities. Very little ice cream passes in interstate commerce, so that only state laws apply to the finished product, though the raw materials, such as the sugar, often come under the federal pure food laws. Such control is wise, for disease can be carried by means of ice cream, just as it may be conveyed in milk or water that is contaminated. Sanitation with respect to ice cream should not end at the factory, but should be continued throughout the career of this food. Places that dispense ice cream should be maintained in a sanitary manner and those that are not should be shunned in favor of those that are. The use of individual plates and spoons, which can later be thrown away, is a hygienic custom that is coming into vogue and is as much worth while as the individual drinking cup and towel.

How is the average person to know whether the ice cream he buys is properly made and handled? There are numerous methods that may be employed to ascertain this fact. The ambitious person may visit the plant of the manufacturer whose product he wishes to patronize and can see for himself what happens there. Modern manufacturers usually welcome visitors and take pride in displaying their methods. If they do not, then it is a case of let the buyers beware and the buyer will be wise to purchase elsewhere.

Another way to evaluate the worth of ice cream is to watch the advertising, which under modern conditions is likely to be fairly reliable. For if it is not the manufacturer realizes that he may get in trouble with pure food officials, health authorities and even the federal trade commission, not to mention his customers. Physicians, local health officers, secretaries of dairy councils and such persons can usually furnish an inquirer with a list of reputable ice cream firms and the products of these manufacturers can be consumed by the family with impunity and to advantage. In the last analysis, however, one of the really important ways in which to find out is by actual personal testing. Rare indeed is the modern housewife or other member of the family who cannot detect the difference between ice cream which has the emphasis on the cream and that which is mostly ice. A good brand is always deservedly popular and a reputation in this regard is, as in the case of all the necessities and other commodities of life, founded on service.

Pacific and Atlantic

There is something about the lines of this building that has instant appeal.

Ice cream is peculiarly an American dish, though it was first made in Italy as early as 1756. It did not reach the United States until the first part of the nineteenth century, when Dolly Madison served it at a White House dinner in 1809. From that time on its favor was established and the cook who had made it for the mistress of the White House later resigned and set himself up as an ice cream specialist.

For many years it has been a staple article in the American diet and of late it has become deservedly popular abroad, where the superiority of this one American item is attested by the fact that foreign ice cream is usually advertised as "American" or "just like American." Three years ago there were only two establishments in London where real ice cream could be obtained. Today it is found everywhere in the British Isles and millions of gallons are consumed annually. It is making similar headway in France. In America "French Vanilla," which the French never heard of until recently, has long been popular.

Ice cream, health in frozen form, is food. No normal individual makes a mistake in partaking of it and the more he gets the better, within reasonable limitations. No mother is guilty of any error in letting her children have a proper amount as often as they desire it and the family budget permits. If bodily strength, a sound physical system and favorable vitality, with adequate resistance to disease, are to be desired, as they are, in ice cream will be found one really excellent source of all these attributes.

Do Poor People Like Bad Housing?

By Scott E. W. Bedford

WHEN bad housing is discussed, some one is always sure to remark that poor people revel in dirt, bad housing and all their accompaniments. Every one has heard the classic story of the landlord who benevolently installed bathtubs in his houses only to discover that the tenants used them for coal bins. I have always doubted that story, but I was almost convinced at one time that poor people prefer bad to good housing. It was illuminating to get some objective data on this matter.

A not uncommon scene in a Chicago tenement.

Recently a careful study was made of the case records of 184 families that had been for an extended time under the observation of the United Charities of Chicago. Among the points

Worse even than the quarters of some of the immigrants are the dwellings of many negro families.

held in mind as these records were studied were the changes that took place during the period of observation. These changes were grouped under different headings, one being the changes that were noted in the housing conditions.

At the close of the contact of the United Charities, 144 out of the 184 families were known to have inadequate housing from the point of view of the committee on the family of the Chicago Council of Social Agencies, which adopted the housing standards for charity organization work in Chicago.

All these families had received service from case workers of the United Charities during a period ranging from three to ninety-seven months. During this contact, fifty-two of the families had moved to better housing than that which they occupied at the beginning of contact. It is safe to assume that efforts had been made in every instance to secure adequate housing and that the 144 remaining in a poor environment at the close of contact did so because the community did not furnish opportunities for housing that would meet the standards at a cost these families could pay.

The improvement was sometimes marked, as in the case of an American family that at the time of first contact lived in basement rooms for which was paid $7.50 rent and at the close bought a six-room cottage in a pleasant outlying section. An Italian family, whose first home was three dark and dirty rooms, moved to six rooms, spacious and clean with a rear roof for window boxes. A capable German woman managed to change from three rooms without modern conveniences in a rear house in a crowded part of the city to four rooms with bath,

Several model tenements have recently been constructed in the East and others are projected. The Metropolitan Life Insurance Company has built in New York City the wage-earners' appartments on this page. In the circle is the architect's drawing of the wage-earners' garden apartments erected by John D. Rockefeller, Jr., in New York City.

Photos by Underwood and Underwood

gas and electricity in a well-built apartment house in a good residence neighborhood. In other cases the improved surroundings were still undesirable, although better than the first.

Recent immigrants were naturally among those found in the worst housing conditions. A Russian family that had been in America only three months consisted of father, mother and six children, ranging from a baby in arms to a boy of 11 years. They were living in one room in a damp, poorly lighted basement. There were no partitions and there was no privacy. The mother was under strain, constantly quarreling with her family and neighbors. At the close of the records a few months later the family occupied a six-room apartment and the tone of the family life had greatly improved.

Negro Families at Greatest Disadvantage

Negro families are at even greater disadvantage than the recent immigrant in finding suitable houses. It was possible at times, as with the following family, to help them secure places in which conditions were reasonably good.

The S. family, when the record opened in 1923, occupied a damp basement, partitioned into rooms by means of curtains. The family consisted of Mr. S., who had just been discharged from the tuberculosis sanatorium with his tuberculous spine in a cast, Mrs. S. and three small children, ranging in age from the baby of about a year to a girl of 11. In addition, they rented part of the curtained-off space to another family of three for $5 a week. The last entry showed the family living in a four-room rear flat with large, airy rooms and a large back porch. Mr. S. was in a tuberculosis sanatorium, his condition having grown worse in the damp basement home.

There were twelve instances of deterioration in housing. When the record opened in 1923, Mrs. J. and six children, the youngest less than a year and the oldest a boy of 18, lived in a tenement of four rooms, light and airy and in good condition. When the record closed, the family had become self-supporting by the work of the older children, but had moved to a rear flat of four rooms, two of them dark, opening on a narrow airway. The building was old and the stairs rickety. There was no yard. It was distinctly a less favorable situation than when the record opened. But Mrs. J., who spoke no English, seemed indifferent and perhaps felt, in face of the difficulties of bringing up her family in this strange New World environment without her husband, that she must save in every way possible.

Mrs. L., a widow, and her two children, a girl of 12 and a boy of 6 years, were living in three rooms on the second floor of a rear house. The situation was fairly good from the housing point of view, as the rooms were clean and well lighted. Later, Mrs. L. married a widower with three children and brought them all into the three rooms, thus crowding both groups of children into conditions detrimental to health and morals.

Among the sixty-four families whose environment was unchanged at the close of the record were some in which no change was necessary. Mrs. L., with her three boys, ranging from 5 to 11 years, and a baby girl of 2 years, lived in a brick cottage of four rooms, placed on the rear of a lot. The house was in good condition, had gas, inside toilet and bath, and with the exception of one bedroom, all had two or more windows. Mrs. L. and the baby slept in one bedroom, two boys in the other, and the third boy on a davenport in the living room. Mr. L. was in a tuberculosis sanatorium. The family continue to occupy these quarters, supported by a mother's pension and supplementary aid from the United Charities.

Supply of Good Houses Limited

Although 42.6 per cent of the families had changed to a more favorable physical environment before the close of contact with them and although only 10.3 per cent had made changes for the worse, housing conditions at the close of the record were far from satisfactory, as shown by the following summary of the way in which the families were housed at that time:

	Families
Good housing in a good neighborhood	25
Good housing in a crowded or otherwise undesirable neighborhood	52
Housing below the standard outlined	92
Incomplete information on housing at last contact	12
Family broken up	3
Total	184

Present conditions in Chicago, as in most other large cities, do not make it possible to secure, for any considerable proportion of families on low income, locations that meet the minimum standards of housing.

It is clear that most charity clients are badly housed. But most of them move to better conditions when able. The fact that some deteriorate in housing does not mean that they like bad housing; it may mean they cannot move to better or cannot remain where they are. When the supply of good housing is limited, it is difficult to draw conclusions.

The War Against Physical Handicaps

Twenty-Five Years with the Orthopedic Surgeon

Part II

By *Fred H. Albee*

THE hunchback is one of the many sufferers to whom aseptic plastic surgery has proved a boon. Pott's disease, or tuberculosis of the spine, produces the deformity known as hunchback. The orthopedic principle of making immovable the diseased joints, to prevent further increase of deformity or spread of disease, is applied in these cases.

Because of the effect of muscles used in breathing and in voluntary motion on the deeply situated diseased vertebrae, the spine presents the most difficult problem for the orthopedic surgeon in the entire body. But by means of the bone mill it has become possible to insert a bone graft into the substance of the spine or by the Hibbs technic to fuse the vertebrae so that absolute loss of movement takes place without compressing the chest or interfering with respiration. This is of especial importance because of the slow healing capacities of bony tissue affected with tuberculosis, and because of the necessity of maintaining treatment by plaster jackets or braces for so long a time.

The old method of treating tuberculosis of the spine was by frames and plaster casts.

The bone mill also permits restoration of extensive loss of bone, resulting either from war injuries or industrial accidents. The length of bone graft is now limited only by the length of the bone from which it is removed. Repeatedly have grafts 10 inches long been successfully made.

Again, in the support of a joint or in the act of making it immovable, such as the hip or sacro-iliac joint that has been destroyed or deformed by tuberculosis, the bone graft offers an efficient means of treatment never before possible.

There are other types of cases in which joints have become stiff from disease or injury and abnormal bony union has taken place. Deformity and disability are the results. In such cases, extensive operations for reconstructing joints or making them movable are now possible. During the last quarter century the rehabilitation surgeon has gained confidence in himself and has operated on the joints as he would on the abdomen. Aseptic preparation of the field of operation, as well as of the operating tools, and the increased facilities of modern surgical equipment make this possible. Most extensive operative work has resulted, such as the making of joints where bones have become completely grown together in bony union, a procedure that is especially beneficial at the knee, hip, jaw or elbow.

Aseptic surgery has also made possible the transplantation of muscles and tendons. In that most terrible scourge of humanity, infantile paralysis, aseptic surgery enables the surgeon to transplant muscles and tendons to take the place of those that have been paralyzed. By a remarkable adjustment of nature, the brain cells are reeducated so that a muscle that formerly brought the hand to the face to eat will bring the hand to the foot to put on a shoe or will allow the knee to be straightened or bent. A muscle that bent the knee will, after transplantation, straighten it.

Such remarkable results have been achieved that children whose muscle balance has been so disturbed following infantile paralysis that they were obliged to go about on all fours have been placed on their feet and have become able to walk with only slight impairment of gait.

Muscle training following operation is, of course, essential to the successful outcome of such treatment.

It is impossible in so brief an article to do more than touch on the interesting question of fractures. Suffice it to say that previous to this period, ununited fractures without loss of bone substance were considered a rather hopeless surgical problem. Now, with the advent of the electrically driven bone tools and with the bone graft, they may be satisfactorily controlled and treated. Lighter materials, such as duraluminum, have been discovered for splints and braces, much to the delight of the patient.

Generally speaking, bone and joint tuberculosis in children, or surgical tuberculosis as it is often called by the medical profession, is due to the bovine type of tubercle bacilli, whereas pulmonary tuberculosis is due to the human type of bacilli. In this country, because of the efficient control of the tuberculous cow and the milk supply, bone and joint tuberculosis has markedly diminished. This is strikingly emphasized when one visits a country like Scotland, in which the tuberculous cow is still frequently in existence and bone and joint tuberculosis is still rampant.

Scurvy and rickets have also practically disappeared from the United States for an entirely different reason: The public has been educated to the value of sunshine and fresh air, proper diet, pasteurized milk, properly modified milk for infants, and the injurious effects of dry preparatory foods. Meanwhile rickets is still running wild in many parts of Europe.

A New Lower Jaw

A few typical cases may be interesting and illustrative of what orthopedic surgery is accomplishing today. A lawyer from Michigan, who prided himself on his patriotism, planned as part of his Fourth of July celebration to bring forth the old family cannon. He loaded it so that it would be ready to explode at the proper time. The boys, however, thoughtless of the outcome, followed him up, and loaded the cannon to the muzzle with stone. When the time came, the father set off the fuse and walked away about 40 feet. It exploded, and a fragment of the cannon struck him on the side of the face, carrying away the lower jaw just back of the last molar tooth on the right side and just in front of the last molar on the left side.

The soft tissues were restored by turning up skin and soft parts from the shoulder and from the upper arm, so as to produce a fairly normal contour of the face. Then, when these tissue grafts had healed in, a U-shaped graft was taken from the pelvic bone and used to restore the loss of bone of the lower jaw.

This type of frame was formerly in general use; the modern method of bone graft is now gaining favor.

From the point of view of restoration of function, the next case is striking. A young woman who had been in an automobile accident had sustained a comminuted (crushed) fracture of the upper arm, with resultant loss of 7 inches of the upper arm bone, including the head of the shoulder.

This was most disastrous as she earned her living as a concert pianist. It was a question whether she could ever return to her profession, but in any event no effort should be spared to bring back usefulness to the arm. Therefore the surgeon took out the upper half of the fibula (the small bone of the leg, extending from the knee to the ankle), including the head of the fibula, and transplanted it, using the head of the fibula to replace the head of the humerus. This patient has now been back at her concert playing for six years, and the repaired arm functions so well that it has not in any way interfered with her profession.

Abdomen and Skin Aid in Making Finger

A man employed in a large industrial plant had his right hand crushed in such a way that he lost the palm and four fingers. The thumb was left intact, with full amount of strength and motion, but its usefulness was nil because there was no finger to oppose it against. Consequently he was unable to feed himself or to grasp objects of any size.

This condition was overcome by taking a large rectangular piece of skin and subcutaneous tissue from over his abdomen and forming it into the shape of a finger. This improvised finger, still in contact with the abdomen wall at one end, was fastened to the stump of his palm at the other end, and allowed to remain for three weeks attached to both his abdomen and hand, until the circulation was thoroughly established between hand and finger. The finger was then cut loose from the abdomen, and at the same time a properly shaped piece of his shin bone, 3½ inches long, was inserted for the bone of the finger. This transplantation plastic operation so far restored the usefulness of his hand that he can use a knife and fork and handle a hammer.

Another interesting addition to the equipment of orthopedic surgery is the kangaroo tendon for bone sutures. The kangaroo has a

tail about 3½ feet long, which is made up of innumerable little tendrils or cords that vary in size from a large thread to the size of woolen yarn; and in length up to 2½ feet. These are extremely strong, easily stripped apart and sterilized. They have been used for a universal bone suture to take the place of silver wire, nails, screws and metal plates formerly used. They are prepared in saturated solution of chromic acid to delay their absorption, and therefore form an ideal fastener for bones.

Improvising a finger from tissue from the chest; the hand and chest wall are attached until circulation is established between hand and finger.

In case of flail joints in persons over 6 years old, arthrodesis—the surgical fixation of a joint so that it is stable—is beneficial, in that many times weakened or paralyzed muscles can thus be fortified against weight-bearing or against a stronger antagonistic muscle, so that balance is restored and the person is able to walk. These operations do not usually involve the use of the bone graft, except in certain cases.

Operations on the Spine

In most advanced cases of paralytic curvature, or scoliosis of the spine, fusion of extensive segments of the spine either by bone graft or by such methods as the Hibbs operation is most beneficial. In certain cases in which the lateral curvature is so severe that the lower ribs are telescoped inside the pelvis, the surgical fixation of the spine has been supplemented by means of a bone graft properly placed between the rim of the pelvis and the ribs, after the posture of the spine has been corrected as far as possible by manual pressure and the ribs restored to their normal relationship.

Certain paralytic deformities of the foot, which result in instability or awkward gait, have been most satisfactorily corrected by an operation by which the ankle bone is removed and at the same time a good degree of functional motion afforded.

In certain cases of paralysis in which lack of muscle support has allowed the hips to dislocate repeatedly, the hip socket has become shallow to such a degree that the hip will not stay in, even when replaced. In these instances, reconstruction plastic surgery has accomplished a great deal in making it possible to increase the depth of the socket by detaching and forcing out the rim of the hip socket and maintaining it in this position by means of a wedge bone graft placed in the interspace thus formed, and so deepening materially the socket and assuring the maintenance of the hip in position.

In adolescent life, following severe injury, the vertebrae in the lower lumbar region may dislocate forward with a consequent contraction of the pelvis and with pressure on the spinal nerve roots and the lower end of the spine, causing irritative or paralytic symptoms in the leg. The displacement of the vertebrae is forward into the abdominal cavity, and therefore satisfactory corrective support from braces or jackets is impossible. Correction and support by implanting bone grafts into those parts of the involved vertebrae that project backward, and into the sacrum afford brilliant results.

In cases in which limbs must be sacrificed, the patient is still in a more fortunate position than the one of twenty-five years ago. There is no longer an attempt to employ artificial limbs until deformities or contractures involving joints near the stump have been corrected; the durability of the artificial limb is greater and its weight less than formerly, and the surgeon takes greater care to follow up such cases until the patient has been thoroughly educated and accustomed to its management.

Too much emphasis cannot be placed on the use of plaster of paris. Although it has long been employed, it still remains the ideal splintage, and the technic of its application has been markedly improved.

Radical work in the removal of the membranes that secrete fluid in chronic infections of the joints has been developed during this period.

Electricity as Healing Aid

Furthermore, this is an electrical age in every respect, and electricity has been brought to the aid of human sufferers in the form of diathermy, x-ray treatment, electrotherapy, and electrically driven surgical instruments. Bone tumors, to use only one illustration, have been diminished by radium therapy.

Both the diagnosis and treatment of flatfoot have undergone a readjustment during recent years. It has come to be realized that in many cases flatfoot is due to toxic muscles and not to overworked muscles. Therefore the question of focal infection, which has been so satisfactorily developed, is of importance in a type of case in which it might seem least applicable.

It seems far fetched that a focal abscess at the root of a tooth, that an infected tonsil or a sluggish colon would produce flatfoot. Nevertheless such is often the case, and treatment must be applied to the original cause as well as to the local complication. The sooner the original cause is discovered and eradicated, the more complete will be the cure of the local condition.

Muscle training, an important phase of orthopedics, is a field so wide and so interesting that I can but briefly touch on it. More and more, medical men have come to realize that muscles that are seemingly paralyzed are only more or less dormant, partially but not completely atrophied. It is like the difference between fainting and death. So, with careful training and with attention to the weak and not the strong muscles (lest the strong muscles be made overstrong and the balance further destroyed), it is possible to obtain truly remarkable results, if only the patient will have patience and persistence. It is often a tedious treatment. However, when it is realized how markedly it has diminished the use of braces or shortened the period of their use, the tedium is welcomed.

Muscle training should always be carefully supervised by an orthopedic surgeon, though a well trained masseur may carry it out under his direction. It is only correct diagnosis and careful direction that render it valuable. It has been applied with increasing success in a variety of cases, notably infantile paralysis, spastic paralysis, and following the transplantation of muscles, when irretrievable nerve injury has occurred; also following various stabilizing and plastic operations, as well as for the correction of postural defects.

Courtesy of Thumbs Up

One occupation well adapted to the reconstructed hand is oxy-acetylene welding.

The mildly crippled child, infinitely appealing as he is, must not receive more sympathy and care than the severely crippled adult. The child is appealing because he is comparatively helpless. But many a crippled adult is the breadwinner for several children, and his handicapped condition means that not only is he crippled but also several children are crippled economically, educationally and in general happiness and surroundings.

I am proud of the achievements of the last twenty-five years and loath to leave them with so inadequate a sketch. The road ahead looks like a great adventure: ever increasing technical facilities and laboratory aids (I have not even mentioned the serums, so valuable today); increased daring and ingenuity in coping with surgical problems, owing to these greater facilities and the increasing confidence of the public; and the legal and sociologic responsibility of seeing that the compensation law is so applied that the injured citizen is treated fairly and adequately, but not so demoralized by sympathy and leisure that he becomes a parasite.

The Nervous Child

IV. Nail-Biting

By
Frank Howard Richardson

NAIL-BITING, like thumb-sucking, is a persistent habit. Like thumb-sucking it occurs in many children who would not otherwise be considered nervous, but also like thumb-sucking it occurs with greater frequency and with far greater intensity and persistency in those who for one reason or another fall into the class of nervous children.

Much as these two disagreeable habits have in common, there is one fundamental difference between them. Thumb-sucking is a vestige or persistence of something that was normal at one stage of the child's life, at least to the extent that probably every child has at some time or other sucked his thumb or finger. Nail-biting, on the other hand, cannot fairly be considered a natural or normal act at any stage of life or of development.

Its Social Drawbacks

The practice of nail-biting may be found in all walks of life, at all ages and in persons of all degrees of intellectual attainment. Indeed, there is hardly another habit at once so disgusting in practice and so deforming in results that is observed in otherwise charming, delightful and generally admirable folk. The fact that persons of this sort, whom one would expect to be keenly alive to the social drawbacks inherent in such a habit, are as a rule so supremely oblivious of the disagreeable impression it makes on beholders is suggestive of the difficulties that are to be met with in establishing a cure. Their freedom from self-consciousness coupled with their evident lack of shame over a condition that might be reasonably expected to cause them acute concern testifies to the strength of the hold that this habit exercises over its followers.

No other habit so truly and accurately records the nervous or emotional state of mind of the victim at various times as does this one. For instance, when everything is going along smoothly and the child is fairly calm and placid, he may not indulge in the habit at all. At times of nervous tension or of emotional stress, he may bite his nails to such a shocking degree that one wonders if he is not actually reaching the quick with his frenzied, ratlike gnawing.

No one needs to be reminded of the peculiarly repulsive appearance of the ends of the fingers and thumbs of the habitual nail-biter, except perhaps the victim himself, who often is supremely indifferent to the looks of his hands, although he may be careful of the appearance of the rest of his person. Not only the true horny nails but also the loose bits of skin and the cuticle are nibbled, until the appearance and even the shape of the digits are appreciably altered. There is a disagreeable, lusterless, dead look to the nails; the skin of the fingertips is shriveled and rough, and practically none of the free edge of the nail is allowed to go uncropped.

Unfortunately, this practice is frequently allowed to persist unchecked from childhood through into adult life. Direct imitation of these adults by the children with whom they are thrown in contact is a considerable factor in the prevalence and persistence of the habit. Nail-biting is commonest among children that have been accustomed to witness it in one or both parents or in other adults with whom they are associated and for whom they have respect.

Must Cure Adults First

One of the important aspects of the prevention of this habit in children and the most potent factor in bringing about a cure consists in the attempt to eradicate the habit in the adults with whom the child comes in contact. It seems little short of hopeless to bring about a conquest of this besetting vice in a child who constantly sees his father and mother indulging in it. Hard as it is for an adult to rid himself of a lifelong indulgence, there is nothing that can spur him on to the endeavor quite so powerfully as the realization that his continued indulgence may

be the one thing that stands between his child and the breaking of the chains that bind him.

While the victim of this habit is often singularly free from a realization of the disagreeable effect produced on others by his addiction, the sight of this previously unregarded act when practiced by his own child may produce an acute realization of its offensiveness. This vivid dramatization of his disgusting habit, set forth in the person of his children, may be the one thing needed to induce the parent to free himself of his addiction.

Next to this in importance comes the curing of the nervous condition of the child and the overtense emotional state that is the usual accompaniment of nail-biting in its extreme form. Without some improvement in his general emotional tone it is practically hopeless to expect results. No matter how difficult this may seem in actual practice, it should be done because if the emotional tone does not improve, special measures looking toward restraint are as apt to do harm as good. The underlying condition is going to find some outlet and if it does not evidence itself in this way, it is likely to show itself in some other perhaps even less acceptable manifestation of nervousness.

Methods of Restraint

After rectifying so far as is possible the causative nervous condition and cutting down the occasions of special stress, we may consider some of the methods of restraint that were mentioned in the case of thumb-sucking. Unfortunately, the more advanced age of many nail-biters usually renders restraint out of the question.

One course of treatment much resorted to consists in dipping the fingers in a solution of bitter tasting quassia, quinine or strychnine. Probably the only value in this is to remind the child by the villainous taste of the mixture that he is doing something that he is supposed to desire to stop doing. Of course if he has not been brought to the point of seriously wanting to stop, such a reminder will be useless. For this same reason, the restrictive devices are rarely of use at the age when this vicious addiction has its strongest hold. So it is highly important that a desire for improvement be built up in the child; to do this, a procedure somewhat similar to that recommended in the cure of thumb-sucking may be advocated.

First, it is desirable to secure the confidence of the child. Without alluding to the disagreeable appearance of his hands or of those of the elder whom he has been subconsciously copying, it is well to call to his attention the fine looking hands of some other person of whom he is genuinely fond. After doing what can thus be done to implant the desire for improvement by imitation of a loved adult, it has been found useful to appeal at once to the youngster's love of personal decoration, his fondness for doing things and his desire to imitate.

Interesting the Child in the Manicure

All these may be subserved by teaching him the technic of the manicurist, at least to the extent to which any one should be familiar with it for the sake of the respectable appearance of his own hands. The preliminary soaking of the hands, and especially of the fingertips, in hot soapy water; the careful snipping off or clipping away of any loose tabs of skin or cuticle (not, be it understood, the barbarous practice sometimes observed of cutting away the cuticle from around the borders of the nail), and the anointing of the skin of the fingertips with cold cream in order to get back its normal tone and texture should be taught the child. As soon as the nails have grown out sufficiently to allow of the use of the nail file, this should be brought into play and its use should be substituted for that of the nail scissors. Most valuable aids in bringing about a changed appearance of the hands are buffer and nail powder; polishing may be indulged in without limit.

Suggestion to the elders who make up such an important part of the child's world that a little favorable comment judiciously bestowed will not come amiss may also help in the development of a sense of real satisfaction on the part of the child with the greatly improved appearance that results from his efforts.

While this method might at first blush be considered more applicable to girls than to boys, it is not so in fact, as actual experience will quickly demonstrate. Boys are prompt to respond to the appeal for personal cleanliness and attractiveness, especially at certain ages; and this appeal may constitute the turning point in getting rid of this most persistent habit.

The very fact that the habit does so often carry over into adult life should make those of us who are responsible for the care and welfare of children particularly alert to detect it early; and having detected it, early or late, make us untiring in our zeal to cure it by every means in our power.

The Woman of Middle Age

and Some of Her Health Problems

By J. H. J. Upham

Women, in the decade between 40 and 50, need to observe certain definite rules of life.

MANY more persons would live out the scriptural three score and ten and more would enjoy a comfortable old age if, in the decade between 40 and 50, they would observe certain rules of life.

Elderly women often lead lives of suffering, both physical and mental, because of neglect of measures that should have been taken in middle life.

Child-bearing is a natural physiologic function, but it entails a tremendous strain on organs and tissues. Many women go through one child-bearing strain after another with inadequate or no reparative measures; they come to middle life badly handicapped, and if they reach old age it is with irreparable damage.

On entering the forties, when childbearing usually ceases, a woman owes it to herself and to her family to have a thorough physical examination so that she may get an estimate of the functional and organic damage that may have occurred and may take the necessary reconstructive or reparatory measures.

Such an examination is too often shirked because of the fear of a surgical operation. Surgery in many cases will not be necessary. Simple exercises may be prescribed to strengthen overstretched abdominal muscles, give relief to distressing backaches, support organs beginning to drop down, or stimulate better intestinal action. Dietary measures may relieve other functional and organic strains, and simple hygienic suggestions correct other discomforts. Even if an operation is necessary, at this period of life it is often a minor affair compared with what it may be in after life if the conditions are neglected. In the years of relief afforded, in the preparation for the strain of the menopause, and in the possible avoidance of more serious developments, the value of corrective measures cannot be overestimated.

Probably the disease that women dread most of all, and rightly so, is cancer. Cancer is the great scourge of middle life. Too often in spite of the vaunted progress of medical science, it baffles the physician's best efforts. For years, research workers have been seeking its cause, but thus far in vain. It has been the hope that a germ might be found as the active agent, for the reason that the discovery of a cancer germ would point a way to prevention or cure.

Dr. Maud Slye, a woman physician, in attacking this world-old scourge of women, has recently brought out some suggestive observations that, while not as yet substantiated by the work of others, may possibly lead the way to the solution of this grave problem.

Dr. Slye gives a forceful challenge to the germ theory of cancer when she asserts that cancer does not resemble any other infectious disease

and urges the necessity of searching in other directions for the cause. Seventeen years ago she began such a search, and since that period she has used 75,000 mice in breeding experiments. She has come to the belief that cancer is due to a faulty repair process of the tissues after injury or prolonged irritation. She believes that this tendency or faulty repair mechanism is inherited and is as completely subject to the mendelian laws of heredity as are color of the eyes and hair, other physical qualities and even recognized tendencies to certain diseases.

Another observation of Dr. Slye's, borne out by other investigators, will prove of immediate practical value. It is full of hope for those who may be alarmed at the thought of a cancer strain in their ancestors. According to Dr. Slye, cancer is primarily a local process and the inherited taint seems to be transmitted in the same locality or in the same organs as in the ancestor; that is to say, cancer of the womb in the ancestor is repeated by cancer of the same organ in the descendant. Furthermore, cancer is not inevitable even in those strains with a strong cancer taint, but seems to be inaugurated by some form of injury or irritation.

The influence of injury or irritation has long been observed in human beings, and this gives force to Dr. Slye's belief that cancer is the result of a faulty repair process. She has noted that ordinary cuts and bruises heal promptly in noncancerous mice, and just as promptly in mice with a strong cancerous taint if the injuries are located in other parts of the body. If, however, a mouse with an inherited tendency to cancer of the breast should in some way receive an injury to the breast, cancer would be likely to follow.

If There Is Cancer in Family

The lesson to be drawn is plain. If there is an instance of cancer of the womb in an ancestor, the women of that family should be especially careful in seeing that the injuries of childbearing are repaired, and on entering the cancer age, beginning at about 30 years, should be examined periodically, at least twice a year, so that the earliest discovery of an abnormal condition may be made. Prompt operation makes possible a cure.

The same may be said of cancer of the breast. If there is such a taint in the family, these organs should be guarded as much as possible from injury, and periodic examinations should be made yearly or oftener to discover the very earliest appearance of any little lump in the breast that may mean a beginning cancer. The early stages of cancer may be entirely painless, its development insidious, and too often it goes on to an advanced stage before discovery, when even wide, mutilating and serious operations are necessary to give a debatable hope of cure.

If these precautions were more generally observed and earlier operations undertaken, the dreadful death rate from cancer would be greatly reduced, and from being one of the most frequent causes of death in middle life, it would be relegated to a less important position among the sinister enemies of the human race.

Diabetes

Another condition which while not restricted to middle life often arises in that period is diabetes. Those cases occurring in childhood are probably the result of inherited or acquired organic deficiency; they run a relatively short course and are frequently fatal. Those developing in middle life, however, run a slower course and a large percentage of them are preventable and unnecessary.

The onset and early course of diabetes are so insidious that unless its presence is discovered accidentally, as in an examination for life insurance, for example, it usually reaches the chronic and incurable stage before causing sufficient evidence to arouse the patient's suspicion.

Diabetes was familiar long before the Christian era, but little was known concerning it until within the last thirty years. In that time it has been discovered that, while many factors may be active primarily, the eventual condition is an exhaustion of the internal secretion of the pancreas.

Sugars and starches are the great source of energy for the muscles of the body. Taken into the body and acted on by the gastric and intestinal secretions, they are absorbed and carried to the liver, where the excess is removed and stored up. Whenever a person performs muscular work or exercise, through a mysterious agency a message reaches the liver to set free some of its store of sugar. When it does so, the raising of the level of the sugar in the blood stimulates the pancreas to discharge a secretion that acts either directly on the sugar or in some way on the muscles so that the sugar may be utilized. Without this secretion, or if in insufficient amount, the sugar may be in excess in the blood, but the muscles are unable to use it.

If the blood sugar is kept constantly above the normal level, the pancreas is constantly overstimulated, and in the course of time its powers are weakened so that it cannot function properly, the excess sugar in the blood passes out through the kidneys, and its recognition in the urine is the first proof of the presence of the disease. From this fact many people think of diabetes as a kidney disease, which is not at all the case, although it may lead to disease of the kidneys in the later stages.

There are two important deductions to be drawn from the foregoing: (1) persons who eat excessively of sugars, particularly if they do not exercise in proportion, will favor the tendency to a high blood sugar content with resulting

overstimulation of the pancreas; (2) some persons may inherit a weaker pancreas than normal and in middle life it may fall down under even the average intake of sugar and starches.

These two groups comprise a large percentage of the cases of diabetes developing in middle life, and in these the disease is in a great degree, if not altogether, preventable. In the remaining cases in which various diseases of the liver or pancreas are the cause, the condition should be recognized earlier and the progress materially checked.

This may be accomplished by regulating the diet according to the storage capacity of the liver and the insulin strength of the pancreas, which may be roughly estimated by a simple procedure known as the sugar tolerance test.

Those persons who have had a case of diabetes in the family or who are especially fond of sweets and indulge themselves, or who are overweight should have this sugar tolerance test from time to time so that the earliest signs of pancreatic strain may be detected and appropriate measures of relief taken. If this were done on a general scale, the number of cases of this disease would be greatly reduced and many more people would enjoy a more healthy middle age.

High Blood Pressure

The next greatest foe encountered in middle life is high blood pressure, with its attendant disorders. High blood pressure is not so serious in itself as in its results, which sooner or later are disastrous. It may bring about the clinical picture of heart disease of middle life or after middle life; this has led some people to believe that there has been a great increase in heart disease in recent years. In reality this condition is not so much a disease of the heart as it is an exhausted state of the organ brought on by the excessive work necessary to maintain the circulation in the presence of this increased pressure.

High blood pressure may bring on a hardened condition of the arteries, which weakens them so that some time a small vessel in the brain may give way and the person has what is commonly called an apoplectic stroke.

If the kidneys are not already diseased and are not the initial cause of the high blood pressure, they may become deranged and this may lead eventually to a fatal outcome by Bright's disease.

Thus high blood pressure unrelieved leads after years to one of three disastrous terminations, an exhausted heart, an apoplectic stroke or death from chronic kidney disease.

What is the cause of high blood pressure? Many causes have been asserted, such as excessive meat eating, coffee, tea and alcoholics, infected teeth and tonsils, constipation, heart disease and overweight, but nothing more has been proved than that these are as secondary contributors to some other malevolent agency.

The latest theory is that certain substances which are the results of the wear and tear from bodily activities and which normally are eliminated by the kidneys, through the skin and by the lungs in the expired air, are not so thoroughly thrown off as a person slows down in middle life. Being retained in the blood, these substances act on certain centers to contract the blood vessels and thus bring about an increase of blood pressure.

The blood pressure tends gradually to increase from early life to old age. One often hears the statement that the normal pressure is 100 plus one's age; this is not true after 35 or 40.

A normal child never has high blood pressure; elimination of his waste products is thoroughly maintained by the kidneys, assisted by the skin glands and by the deep respirations induced by the games and active bodily exercises. By 30 most people begin to slow down somewhat, and this is fairly well established at 40. The average person by this time has become more or less sedentary, his bodily activity has markedly slowed, he puts on weight, which is definite evidence that he eats more than he burns up by exercise.

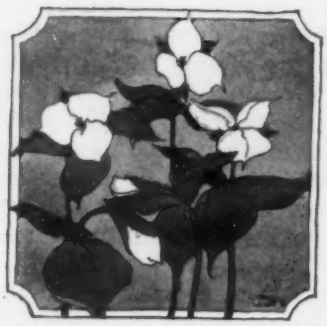
Is it not reasonable to suppose that he is not eliminating nearly as much through his skin and lungs as before, and that there may easily occur a retention in the blood of pressor substance? This alone will account for the gradual tendency to increased pressure, and when to this is added the presence of infected teeth or tonsils, excessive eating or excesses of any kind, overweight or anything else that may cause excessive or abnormal waste products, one can grasp the possible result on the blood pressure.

Early Discovery Is Important

The time to cure high blood pressure is before it has become firmly established. The approach of this morbid state is so insidious that by the time it causes symptoms that attract the patient's attention, some of the secondary complications have already developed.

Thus in this as in diabetes, cancer and the damages resulting from child-bearing, the matter of greatest importance is prevention and the greatest aid to this is in the earliest discovery of the morbid tendency. The only safe way for those approaching middle life is to have a regular periodic examination to see just where they stand and just how well they are prepared to meet the enemies of middle life, and to continue these examinations once or twice a year to keep a general check on the wear and tear of this period.

Now that Spring Is Here



Sanitation *in the* Laundry

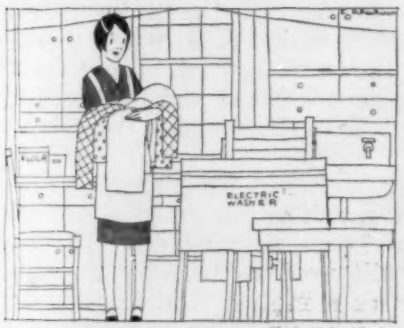
By Grace Marian Smith

II. Taking the Drudgery out of Wash Day

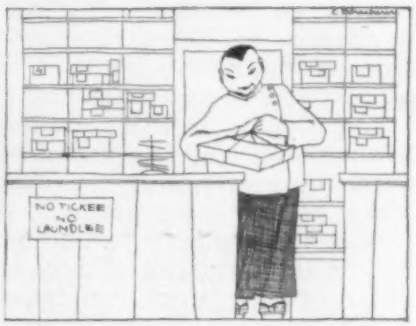
ONE of the things that operate to raise the standing of any work is an appreciation of its importance in the scheme of living.

In a country in which the women take the soiled clothes down to a grassy bank, beat the dirt out on the stones, twist the garments in their bare hands, and spread them on the bushes to dry, laundering can hardly be expected to rank as an interesting occupation.

Rubbing clothes viciously on a corrugated board or pounding them in a tub with a stomper will clean them, but such methods are scarcely modern and besides they are hard on the clothes and the operator. Forcing soapsuds through the clothes cleans without damaging them and a machine can do the work. Instead of twisting the clothes to dry them, thus twisting and rending the fibers, they may be folded and pressed between the rolls of a wringer with better results and less damage to the clothes. But even a good wringer would look out of place in a modern laundry, where the clothes are dried in a spinning basket, or extractor, which whirls the clothes so rapidly that the water is extracted by centrifugal force. In from three to five minutes the clothes are dry enough to put through the electric ironer; after six to eight minutes whirling, they are "bone dry" and may be hung on a rack for the airing that adds to their clean freshness. Such driers made in home sizes are a part of some washing machines.



Family size ironers are desirable. If one cannot afford these, an ironing board adjustable as to height and with a removable wash cover should be fitted into a niche in the wall, with a door to close over it. It is then convenient and protected from dust. Nothing is gained by standing to iron and much energy is consumed. One may use a high stool or chair and adjust the board to the correct height. An electric, gas or gasoline iron saves jumping up and down frequently to get a hot flatiron. Irons that have an open blaze should be handled carefully.



In these days of soft, light crape things, ironing is not the task it was when women wore five-yard skirts and many of them, all stiffly starched and ironed to a glossy finish, and when the stiff-bosomed shirt was standard for the man of the household.

Appliances for women's work are not in as general use as those for other occupations. Shops, factories, offices, agriculture, transportation and the professions have improved their equipment and practices, while housework is almost as it was in our grandmothers' time. There are washing machines of varying types and degrees of efficiency, but in a large percentage of homes the washboard is still the only piece of equipment for that work. Combined with the arm and back muscles of the housewife, it will do the work; but at what a waste of time, wear on the clothes and expense of nerves, energy and life span of the worker!

In these crowded modern times many housewives are also wage-earners. In the cities an increasing number of families live in apartments of from one to four rooms in a building that has no provision for laundering. Electric kitchenette washers, which hold one sheet, six shirts or a corre-

sponding bulk of other articles and are small enough to fit into a small kitchen, might help those who could afford to buy them, if any one had time to operate them. But there is no time. In spite of "summer time" with which some communities lengthen the hours of daylight, there are only twenty-four hours in a day, many times twenty-four hours' work to be done, and frequently only one pair of hands to do it.

Help from Uncle Sam

Laundering has for so long been classed as an occupation that required only endurance and not education that educated persons engage in it only occasionally. Yet the chemistry and mechanics of laundering are as scientific as those of many other kinds of business and quite as interesting and important. There is interesting reading in the household manuals now available on clothing, millinery, home furnishing, housewifery, nutrition, canning, food budgeting, income budgeting and laundering. The results of investigations and experiments made by the U. S. Bureau of Standards, the departments of agriculture, commerce and labor, and health bureaus, home economics professors, schools and industrial organizations are plainly and briefly told. But this material is unknown to many who daily work with the problems that it discusses.

An apparently intelligent woman who keeps a travelers' rest on a main auto highway complained that she could not get a laundress. She had an electric ironing machine, which she or her maid operated. Partly because they considered it too hard work and partly because of the traditional attitude toward such work, they did not attempt the washing and there were no commercial laundries in the small town.

Looking out of the window the next morning, I saw a fire of cobs and dry branches built on the ground in the back yard. A galvanized tub of water had been placed over it. I knew the family had a farm and instantly visioned a country butchering, though I wondered why they should bring the pigs into town to kill. Curious, I continued to watch. A woman came from the pumphouse carrying a tub of clothes in a scant supply of water. She set the tub on a chair, where it teetered and shifted, and began to rub the clothes on a washboard. It was November and the air was frosty. The woman shivered as she bent over the tub. Her hands were swollen and red with the cold. Yet the inn-keeper wondered why she had trouble getting a washwoman!

Such conditions are more common than they should be. The extension of power lines into new territory, making it possible to serve increasingly larger areas, has resulted in more electrically operated equipment and increased power machinery in the home. More than $202,500,000 worth of home laundry equipment was sold during 1924-1925. We are told that 875,000 home washing machines were purchased last year and that the manufacturers expect to sell a million this year. Better equipment means better work done, more comfort for mother and the graduation of drudges into trained workers.

Laundry Work Best Done by Specialists

The Laundry-Owners' Association has established an institute for investigating problems of the trade and for training prospective laundrymen in the best practices, methods and equipment. Its students study and analyze starches, soaps, sours, bleaches, water and water softeners, dyestuffs, the chemistry of stains and reagents, steam and electricity. They learn the properties and reactions of the animal and vegetable fibers from which fabrics are made, something about the various weaves and their comparative resistance to wear and laundering. They are trained in salesmanship and cost accounting.

Just as spinning, weaving, shoemaking, most of the sewing and much of the cooking are no longer done in the home, so it may be that the next generation will send its laundry to commercial laundries as a matter of course, to be done by specialists who understand the importance of sanitation and are equipped to give it. If not, it will be because housewives are themselves informed and equipped in that field.

Lister at 13; from a silhouette by his father.

The Lister Centenary

By

Elizabeth Chapman

THE CENTENNIAL anniversary of Sir Joseph Lister, April 5, 1927, not only signifies the hundredth milestone of a great surgeon and scientist, but also affords occasion for remarking the results of his discoveries in antiseptic methods, which have definitely contributed to the enjoyment of an increased span of human life.

At about the same time that Lister was experimenting with carbolic acid disinfectants, Pasteur's germ theory had been acceptably proved and Sir James Simpson's introduction of the anesthetic sleep had shown the solution to some of the troublesome problems of surgery.

Frequently in comment about science, the personality of an inventor or discoverer is little dwelt upon, because the inventions or the discoveries themselves are regarded as the paramount consideration. The circumstances of Lister's life, however, are a chain of such consistently formed links that to overlook his character would be to lose much that accounts for his success.

From Quaker Family

His parents were Quakers whose settlement was at Upton Lane in England. Like most of their faith, they enjoyed comfortable circumstances. Their creed encouraged thrift but excluded all forms of worldly pleasure, even art and music, and so unless a young man chose to be a farmer there were not many approved interests into which he might enter. Although an unusual choice, surgery was not forbidden, and when Lister stated his wish to become a surgeon he was not discouraged. Perhaps an incident in the father's life contributed to this. The elder Lister when a child was nearsighted. He found it difficult to distinguish objects seen at a distance, until one day at the window he chanced to look through an airbubble in the glass and was then able to see the same objects without trouble. Years later he evolved from this phenomenon the law of aplanatic foci, and from that knowledge made possible the first perfect English achromatic microscope.

After a normal and happy childhood among the Society of Friends, the son was sent to study at the University of London. There he acquired a broad cultural foundation. In this general course he achieved credit, although he was not a star, but as soon as he began the study of medicine he knew he had found his field, and in this he won high honors.

Of Fine Personality

Emphasis is placed on the gentleness of his character and on his kindness, for while he was fascinated by the study of disease he was deeply touched by the tragic side of early surgery, which was more often productive of grief than success. In appearance Lister was of splendid physique and bearing, and his presence was both as genial as a young doctor and as benevolent as an older surgeon. Mention of this attitude of friendliness may seem superficial, but it will be admitted that long before he could possibly have had the opportunity to develop his science, his contact with veteran surgeons depended almost entirely on his interesting them in himself.

Lister was a student under Sharpey and was first dresser and house surgeon to John Eric Erickson, the famous Danish author and surgeon. Sharpey sent Lister to Syme in Edinburgh. While there, Lister married Syme's daughter Agnes and, in 1860, was made professor of clinical surgery in Glasgow University.

To appreciate fully the importance of Lister's work, it is necessary only to consider the absolute cleanliness of the modern operating room and to contrast it with some phases of hospital practice of sixty years ago. Lister directed his attention to all forms of blood poisoning, commonly termed "hospital gangrene," for owing to its presence the greater benefits of previous efforts of surgery and of hospital treatment had been rendered almost futile. In many hospitals of that period slight wounds, which might have healed even if neglected by a patient going about his work, would develop in the hospitals into serious and even fatal infection.

Before the administration of anesthetics came into practice, surgery had to be performed with great speed. Instruments were used that oftentimes had no cleaning other than that of being dipped into a bowl of water and dried on a convenient towel. If the case was complicated the surgeon often held small instruments in his pockets or even between his teeth, for the sake of convenience. These conditions, aggravating a tendency to fever in a patient not under an anesthetic, resulted in gangrene to an alarming extent, and to those of the profession that felt their responsibility, the increasing death rates were discouraging. The hospital, instead of being a benefit, was actually a menace.

Medallion of Lister, the original of which is in Westminster Abbey.

Lister's experiment that demonstrated his carbolic acid antiseptic treatment as a satisfactory formula was evolved through a series of logically related tests. First of these was made through observation of the iris.

A German professor held the theory that the iris was made up of involuntary muscular tissue and proved that all involuntary muscular fiber was made up of cells. Lister's experiment confirmed this, and he demonstrated for the first time the existence of two distinct muscles in the iris; the dilator and the sphincter, whose functions were to enlarge and diminish the pupil. This same mechanical action applies to the muscles of the skin that elevate and depress the hairs, causing the familiar phenomenon of goose skin.

This in turn led to experiments in the healing of inflammation and explains the recognized importance of sanitation in surgery. Lister characterized inflammation as being accompanied by paralysis of local cells surrounding the wound. He observed that caustics consisting of carbolic acid or searing irons, while eliminating infection in some instances, were not always successful, and so he sought for a formula that could be depended on. He had faith in the prevention of infection by the method of allowing no germs to enter open wounds, whether through the surgeon's hands or through instruments; and in the correction of infection by carbolizing the exposed part.

Although the significance is technical, it means that Lister had discovered a way to prevent decomposition of wounded tissue in a living body and incidentally had opened the way to the preservation of tissue in a dead body for use in the laboratory and dissecting rooms. The benefit of even this incidental discovery has enabled medicine and surgery to develop to an almost unlimited scope the knowledge of anatomy.

When considering the primary importance of sanitation it would seem that any discoveries concerning it would have received the instant cooperation of contemporaries. But professional jealousy is deep rooted and, even though men of experience recognized the value of Lister's discoveries, they were unwilling to accept them and thus concede another's wisdom in having perceived the methods before they had. Even Sir James Simpson, whose study of anesthesia had been a target in his days of approaching success, for both the profession and the clergy, attacked Lister's claims on the grounds that carbolic acid had previously been used as an antiseptic.

Perhaps no individual support could have been more significant than that of Florence Nightingale, who showed from the records in the Crimean War the urgency of sanitation.

But the final triumphant event of Lister's career was the baronetcy from the Crown, which was announced in 1883, a royal recognition from his own nation.

Diet Problems of Mental Patients

Feeding *the* Violent *and the* Depressed

By L. D. Hubbard

MENTAL illness is a disorder of the entire individual and not merely of the mind. Concomitant with the obvious mental derangement comes an upsetting of the bodily economy, which may not make itself so evident but is of importance.

The various ductless glands, which normally produce substances in quantities balancing each other so as to promote the efficiency of the organism, function unevenly, with a preponderance of one or two secretions and a dearth of others. The muscles of the gastro-intestinal tract and the circulatory system suffer from the general disturbance and are either more or less active than is essential to perfect function. The tissues of the internal organs perform their various duties in a disordered manner and the nervous system suffers with the rest. Therefore it is apparent that while the mind receives care and treatment in the mental disease hospital the body also must come in for the share of attention due it.

The lines along which the care of the mental patient must proceed are numerous but it is his diet that is to be considered in this article of the series. The fundamental rules of diet apply as well to the mentally ill patient as to any one else and the same or greater care should be taken concerning proper balance and vitamin content.

When Diet Is Most Important

Variations must be made to suit the needs of individual patients. Needless to say, patients suffering from organic disease, general paralysis patients in the bed-ridden stage, senile patients, those whose mental condition is complicated by tuberculosis, cancer or other obvious physical ailment, require a diet dictated by their state of enfeeblement. It is not such patients whose diet is likely to be neglected. Nor do mental defectives, even idiots, appear to suffer greatly from dietary errors. It is largely the functional psychoses in which diet is such an important factor.

Take, for example, the patient in a state of violent excitement. Three large meals a day seem to make only the faintest impression on his capacity for assimilating nourishment. It is of no consequence whether the excitement is manic, praecox, or even paretic in origin. The output of energy is so far above average that the ingestion of only an average quantity of food means that a rapid and dangerous loss of weight is sure to occur.

It is almost impossible for an excited patient to eat too much, although the amount that such patients will consume with unabated appetite is alarming to one unfamiliar with the condition. A wildly excited patient will eat double meals three times a day, generous meat and butter sandwiches and milk or eggnog at hourly intervals and still scream for food as if famished. Even such almost incessant feeding does not prove too much for the gastro-intestinal tract to take care of, provided that there is no organic difficulty.

Why Overfeeding May Be Necessary

The objection may be raised that this excessive feeding merely produces more energy and prolongs the patient's excitement. On superficial consideration, there might appear to be an element of truth in this argument, and it cannot be denied that the patient becomes stronger and therefore harder to manage. However, an underfed excited patient does not recover as a result of lack of strength, he merely continues his activities until he dies from exhaustion.

The overfeeding method of treatment gives the patient strength, keeps his body in good condition, and gives him a good physical background on which to base his recovery. In many cases there is first an excess of energy with an

increase of excitement, and later (often with discouraging slowness) a gradual increase in weight. Finally, as the patient exceeds his normal weight, there is a gradual subsidence of the excitement. Let it be understood that there is no intention of proclaiming a sure cure for excitements. Not all excited patients gain weight even on the most persistent overfeeding. Not all overfed excited patients come out of their excitements. Most important of all, recovery from the excited phase does not necessarily mean recovery from the psychosis.

The important point is that a patient suffering from an excitement uses up an amount of energy so enormous that a proportionate amount of food must be supplied him, else he will become emaciated and exhausted. Should he be underweight when first observed, as is often the case, a still more intensive overfeeding is necessary to build him up and to give him a good physical foundation on which to base the cure of his mental disease.

Forced Feeding of the Depressed

The problem presents itself from a different angle in the case of a depressed patient. When there is agitation, the loss of weight is often considerable and overfeeding is indicated as in the case of excitements but in far less degree. Depressed patients require an easily assimilated diet, and it should be arranged with a view to combating constipation, which is a common complaint in these cases.

A great deal of the difficulty encountered in keeping a depressed patient properly nourished is his lack of appetite, which often amounts to a distinct aversion to food. Small quantities at frequent intervals are usually accepted easier and digested better than the customary three or four meals daily. Needless to say, dainty service and attractive appearance make more difference in these cases than in any other type of mental illness. Variety is advantageous, and fresh fruits and vegetables are greatly to be desired.

In spite of the best efforts there are always a certain number of patients whose caloric intake is below that required to keep the bodily mechanism of even the most inert person in running order. After all powers of persuasion have been worked to the limit it is necessary to resort to forced feeding, unpleasant as the process is for all concerned. By means of a nasal tube passed twice a day an adequate amount of nourishment may be given.

Although the usual tube feeding consists of three glasses of milk, two eggs, a teaspoonful of sugar and a pinch of salt, the diet may be modified in various ways by the addition of vegetable purées, yeast, meat broths and gruels. All feedings should be given at body temperature and may be repeated at four or six hour intervals if the condition of the patient makes it advisable.

Diet of Epileptics

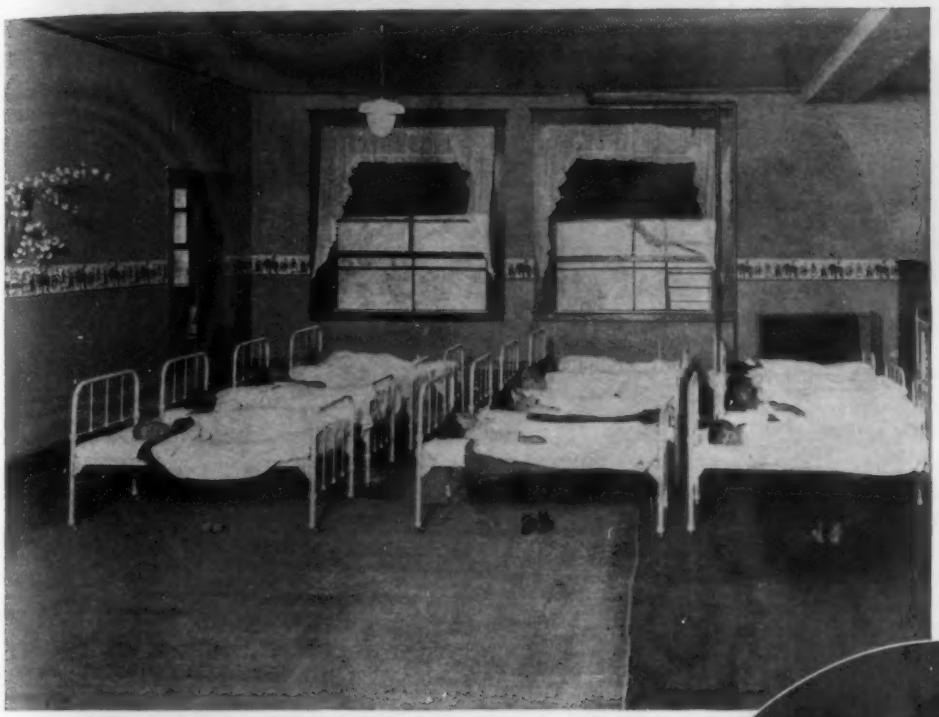
The process of tube feeding requires care but is not dangerous when done by an experienced person. The chief element of risk lies in the chance of passing the tube into the trachea instead of into the esophagus. To obviate this a large tube is used; this makes it impossible to mistake the condition should it arise, for the breath must pass through the tube and the wheezing sound can readily be distinguished from the bubbling made by the passage of gas from the stomach. The method of feeding by tube through the mouth is unsatisfactory because a mouthgag is necessary and the teeth may be broken or the tongue injured.

In the diet of epileptic patients, two aims must be kept in mind, prevention of constipation and ease of assimilation. Few epileptics can live comfortably on diets rich in fried foods and pastries. All epileptics need coarse vegetables, cereals and other foods that promote intestinal activity.

An Orphanage Health Program

How It Was Carried Out in Denver

By Jessie I. Lummis



Underweight children take an extra rest in the afternoon.

THE story of the nine little school boys who started on the nutrition program as told in rhyme in the pages of HYGEIA some time ago and who came up to weight one by one has been repeated in the story of the children at the Denver Orphans' Home.

Four years ago, in February, 1923, when it was found that a large number of the children were underweight, a continuous health program was introduced in the orphanage. More careful attention was paid to the correction of physical defects in the children, following a thorough physical examination; extra rest periods and midmorning and midafternoon lunches were arranged for those who were underweight, and more particular consideration was given to the diet of all the children.

That such a program as the one adopted can produce satisfactory results has been effectively demonstrated. In spite of the constant turnover in the orphanage, with many new children who are underweight coming in, the percentage of seriously underweight children has been steadily reduced in the four years from 24 per cent to 5 per cent and some months to even less. The group up to standard weight for height and age has been increased from 42 per cent to 72 per cent.

The number of children included in the study—those of kindergarten and school age—has varied from 73 to 135, according to the enrolment. The children in the nursery have not been included although a careful health program is followed there also by the nurse in charge.

Margaret's parents died of tuberculosis. Both her chart and her cheeks show how successful were her efforts to gain weight.

When the present health program was first instituted a weekly intensive nutrition class was organized for the twenty-one children who were 7 per cent or more underweight, the group that physicians usually term seriously underweight.

Weighing day at the Denver Orphans' Home.

Fourteen of these children had been exposed to tuberculosis in their own homes. Several were as much as 18 per cent underweight. Not all the members of the class were free to gain at the beginning, but within a few weeks seven tonsil operations had been performed and one child had been fitted with glasses.

This class was conducted by a physician and by a nutrition worker of the staff of the Denver Tuberculosis Society. Not only did the children who were underweight attend this thirty minute class, but the members of the orphanage staff were always present and several board members were visitors. The chairman of the medical committee of the orphanage never missed a class session and assisted with all the weighings. A series of talks on child health problems and health education was also given to the members of the board and of the staff by the nutritionists from the Denver Tuberculosis Society.

Out Go Wieners and Pickles

The diet at the orphanage was carefully checked over and considerably increased in its vegetable, milk and butter content. Such items as wieners, pickles, postum and uncooked cereals were eliminated, while cabbage, spinach, onions, carrots, turnips and beets began to appear much more frequently at mealtime. From the standpoint of economy, more dried fruit was suggested in addition to the fresh fruit already used.

Along with corrections in the diet, rest periods were arranged for all those children who were underweight—thirty minutes just after the noon meal and forty-five just before the evening meal. Children who were underweight were relieved of some of the duties they had performed about the institution and too strenuous activities were curtailed. All were encouraged, however, to be out in the fresh air and sunshine as much as possible.

In the first class, which was an educational undertaking and a demonstration, the average gain per child in the twenty weeks during which the class was conducted was 6 pounds, or three times the expected gain.

Some of the gains were striking and improvements were noted not only in the appearance of these children but also in their disposition.

Dorothy, a little spitfire, would cry on the slightest provocation. Her mother was dead and her father was an ignorant, domineering man. She was one of the first graduates in the nutrition class and became one of the happiest children at the orphanage. Her special pride and care was her little brother Eugene, who was also in the nutrition class.

The improvement of Marie also was striking. Twelve pounds underweight, she came from a home where the mother, deserted by her second husband, worked all day at a steam table. Physicians termed the child pretuberculous. She gained 20 pounds in seventeen weeks.

No one's steady and consistent improvement, however, was more of a joy to those who knew her than that of Margaret, whose parents had both died of tuberculosis. She was 6 inches overheight for her age and 13 pounds underweight. She came up to the standard weight for her height and age in sixteen weeks and developed into the beautiful girl shown in the picture.

Conduct Is Improved

Luther was given a chance at the orphanage through the kind intervention of interested persons, instead of being sent to the industrial school for boys at Golden. Impossible home conditions, such as entire lack of parental control, shiftlessness and lack of any regularity regarding meals and sleep, were probably responsible for the boy's underweight condition. There was an almost phenomenal gain in weight in four weeks and at the same time a development of pride and independence. He has now been out of the home for some time, but he still keeps his interest in the boys' club, and he has not had to go to the reform school.

Many other interesting stories of the members of this first class might be told.

By July of the first year the health program was so well established as a part of the orphanage routine that the weekly nutrition class was omitted; only the monthly visits of the nutritionist continued for the purposes of weighing and of giving a health lesson. So carefully was the health program carried out by the home that those children who were seriously underweight made an average gain of 9¼ pounds between September, 1923, and May, 1924, which was two and one-half times the expected gain. The average gain for the borderline underweights during the same period was 7¾ pounds, or two and one-third times the expected gain. Similar gains have been secured continuously ever since.

During the first Christmas vacation after the formal health program was introduced, because of the excitement, overeating of sweets, practicing for entertainments and many other holiday activities, there was not only an epidemic of colds, intestinal disturbances and upset stomachs, but there was also an almost universal loss in weight, which was strikingly illustrated by the weight charts. With the lesson learned at this time, the home has been able to avoid such serious disturbances since.

The health program is now an accepted part of the regular orphanage program. All children are weighed as soon as they are admitted. The underweight children are weighed every month thereafter by an experienced nutrition worker, and individual weight charts are kept. Various devices are used to hold the interest; some of these, such as a vegetable honor roll and a clean plate record, are kept by the children themselves.

Health talks are given each month by the nutritionist after the findings from the monthly weighings are in. The children usually know the causes for failure to gain. At the time of these monthly visits, the nutritionist is frequently consulted by the housekeeper regarding matters of diet and new menus.

Miss Mary B. Stalker, superintendent of the orphanage, is a graduate nurse and there are other graduate nurses on the staff.

Miss Stalker's enthusiasm regarding the health program has been one of the outstanding factors making for its success. "Not only has the program not made extra work for us," she says, "but it has materially decreased our work and our problems, in that our children feel better, look better and act better."

Willie's Cold

"WILLIE, Willie! Come right into the house. Don't you know you've got a bad cold? Bring the children in here where it's warm.

"Oh, Mrs. Jones, so glad to see you! The house looks dreadful, but do come in. All the children in the neighborhood are playing here today. Willie has a bad cold and I wouldn't let him stay out. He's sneezing all the time. I'll be glad when Monday comes and he can go back to school. Willie, shake hands with Mrs. Jones.

"Willie, did you lose your handkerchief again? Go let Annie wipe your nose with hers.

"Willie, there's the doorbell again. It's Mrs. Smith and her baby. You let them in and talk to them till I get dressed. Kiss the baby nicely.

"Hello! Hello! Yes, I can hear you, Daddy. You want to bring Mr. Black home to dinner. Yes, indeed. Come early so he can have a romp with Willie. I can manage. But don't forget that medicine for Willie's cold. His nose is running awfully tonight. Good-by.

"Don't play in that cold water, Willie, when you have such a cold. Now, go wipe your hands on the kitchen towel.

"Willie, let Howard Green blow that whistle just once if he wants to. You've played with it all afternoon.

"Willie, don't put those cards in your mouth. You'll get them dirty. Those are for auntie's card club tonight. You must not spoil them. Yes, Mrs. Green, Willie has gone back to school again. His ears are still aching some, but the doctor thinks that the drums won't burst. Pretty bad, though. Every one of us has been sick, but Willie was the worst. How's Harold's cold? Did you hear about poor Mrs. Smith? Her children all have dreadful colds, and the baby almost died of pneumonia. She was here the first day Willie was sick, with the baby, and not a thing on its head! My house was nice and warm, and I told her when she went out to cover up the baby's head, but you can't teach some people. Willie just loves the baby. It was too cute the way he hugged and kissed her that day.

"Did you hear what the woman who's just moved in next door said? I've been so mad ever since I can scarcely look at her house. She had the impudence to say the reason her precious boy had a cold was that he came over and caught it from Willie. I'll see that they don't play together again, I can tell you. I know well enough where he got his cold. Didn't I hear her say that she made him take a bath every day? In this cold weather, too! Next she'll be saying Mrs. Smith's baby caught her pneumonia from Willie."—*Told by Health Commissioner William H. Peters of Cincinnati, Ohio, in the Cincinnati Times-Star.*

HYGEIA
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Plain Facts about Health and Disease

HEALTH NEWS OF THE MONTH

The Lister Centenary

On April 5, the world will celebrate the passing of 100 years since the birth of Lord Lister. Elsewhere in this issue appears a brief account of his life and of his contribution to medical science. The story of his life is an inspiration to every medical investigator. Since the time when the results of his research stimulated the development of clean surgery and persons were no longer subjected to the possibilities of bacterial infection after surgical operations, the ordeal of surgery has been greatly lessened. The combination of anesthesia and clean surgery has been responsible for the saving of hundreds of thousands of lives. In his own account of his discoveries Lister emphasizes his debt to the great Frenchman, Louis Pasteur. This very fact indicates that Lister's own contribution was not a matter of chance but was a carefully reasoned step in medical progress.

Child Mothers

Perhaps the most pitiful of all patients that come to the attention of the physician are the little girls, almost babies themselves, who occasionally become mothers. The instance involving the youngest children ever reported in medicine is that of a Chinese mother and father, aged 7 and 8 years. This case is, however, subject to considerable doubt. There is an absolutely authentic case of a girl 8 years and 10 months old who became a mother, and there are many cases of girls 9, 10 and 11 years of age who had this experience. Out of 3,321 births in one Cleveland institution since 1869, there were six cases in which the mother was 13 years or under.

In almost every case the child is born to an unmarried girl and the father is frequently unknown. The legal and social aspects of this situation merit consideration by competent authorities.

Changing Occupations

The national industrial conference board finds that the number of plumbers, gas-fitters and steam-fitters to each million of our population has changed from 209 in 1870 to 1,956 in 1920, an increase of 577 per cent. This obviously reflects the adaptation of modern plumbing to good water supply and sewage disposal, two factors that have been largely responsible for the gradual disappearance of typhoid fever in American communities. It is estimated that there would have been 60,000 cases of typhoid fever in Chicago this year instead of the 200 that actually occurred if the rate for typhoid fever of 1870 persisted today.

The population of 1874 was apparently a fairly clean population but not so ornamental as the esthetes of the present. The number of barbers, hair dressers and manicurists in proportion to the population has risen 229 per cent in the last fifty years.

Soap in Prevention of Mouth Diseases

One of the conditions appearing more frequently since the great war than was formerly the case is an infection of the mouth called Vincent's infection or Vincent's angina. In this condition there is inflammation with the formation of ulcers on the tongue and on the cheeks, and with the formation of a grayish membrane. When the material is examined under the microscope, a spiral organism is found, which is known as Vincent's spirochete.

Investigators in the U. S. Army Medical Corps, Drs. M. A. Reasoner and William D. Gill, have found that the regular use in the mouth of a solution of ordinary toilet soap or of dentifrices containing soaps affords protection against infection with these organisms.

Soap, according to these investigators, is the most valuable ingredient of any of the dentifrices in relation to the prevention of infection. The antiseptic effect of the soap is secured most efficiently when the soap is applied as a thick lather and allowed to remain for a considerable amount of time. If rinsing is done immediately, the germicidal action is reduced to about one fifth of the usual activity.

Soap solutions were used to advantage by the scientists in the treatment of persons already infected with these organisms, but results were not secured so rapidly with the soap solutions as when the more powerful drugs ordinarily used in the treatment of such infections were applied to these cases. In brief, the authors find that the presence of the organisms of Vincent's infection and of the disease itself vary inversely with the care given to personal hygiene and the regular use of soap by the persons concerned and that the proper use of soap and soap compounds is primarily to prevent disease rather than to cure it. In this connection it may be pointed out that almost all powder and paste dentifrices now generally available contain ingredients of a soapy character that have the qualities mentioned by the investigators.

M. F.

THE MISINFORMATION OF McCOY

DURING the last ten or fifteen years metropolitan newspapers, and even some of the smaller dailies, have carried columns devoted to health as regularly as they have published their sporting news and stock market reports. In general, these health columns have been and are sane and worth-while contributions to the public's knowledge. A few of them are outstanding examples of ability to interpret modern medicine to the nonmedical mind.

As is always the case in such instances, false prophets also have arisen and have found little difficulty, apparently, in selling their services to certain newspapers. Among the pseudo-scientists who misinform the public by this route are some who are quacks and others who are merely ignorant. In the effects on the public, there is not much to choose between the two.

One of the recently distributed newspaper columns on what purports to be health and diet advice of the pseudo-scientific type is that which appears under the name of one Frank McCoy, who hails from California. He is heralded as "Dr. Frank McCoy," although the man is not a physician. He does hold a diploma from the California Chiropractic College and a drugless practitioner's certificate from the state of California.

Some years ago McCoy was advertising as a "physculpractic specialist"—whatever this may be—and was advising the public that all kinds of stomach troubles could be cured by correct eating. Not very long ago Macfadden's New York daily, the *Graphic* (more recently dubbed by some the "Porno-Graphic") carried a picture of one Miss Jane Harter obliging "Dr. Frank McCoy, Los Angeles specialist" by blushing, in order to test the heat of the blush by means of an apparatus that McCoy was said to have invented. Just what Mr. McCoy said or did to make Miss Harter blush is not recorded.

In many of the McCoy columns the fact is stressed that he is the author of *magnum opus* "The Fast Way to Health," in which the thesis is developed that practically anything that ails the human machine can be cured by fasting. In this, McCoy modestly says:

> "I have made a most exhaustive study of every method of cure from mind cure to modern surgery and gland therapy, and I have never found a single method that could approach even closely in its results the benefits which come from some form of the fasting cure."

"The Fast Way to Health" is a wordy compilation of platitudes and piffle. From it may be learned, for example, that catarrh and hay fever are "due to the discharge of mucus from a blood stream surcharged with the products of an excess assimilation of fatty and carbohydrate foods." In other words, too much fat and starchy foods and sugars will produce hay fever! In it, too, the reader is told of a man who had been "wholly deaf for about ten years," who went on a fast and in eighteen days could hear a watch tick eighteen inches from either ear! One is assured, also, in "The Fast Way to Health," that mastoiditis (inflammation of the bony cavity back of the ear) is due to pus following "an accumulation of waste products and poisonous material in the body." Chronic tonsillitis, according to the same source of wisdom, is due to "excessive starchy and sugar foods." And all this from one who says he has "studied every form of diet cure and philosophy from the apple diet as first advocated in the Garden of Eden to the present day vitamin idea."

In the same book, sherry is classed among the "light wines," and the reader is told that many cases of blindness and paralysis brought on by drinking home-distilled liquors are due to the "fusel oil and other poisonous substances that are generated." Mr. McCoy then adds: "Similar poisons are manufactured in the alimentary canal when too much starch is eaten or when sugar and starch are mixed together at the same time."

These are merely samples of Mr. McCoy's medical misinformation and dietitic absurdities. The damage that is done by men of the McCoy type is both positive and negative. It is positive in that it gives the nontechnically trained public a large amount of misinformation; it is negative in the harm that may follow the postponing of proper treatment. As an example of the latter, in one of McCoy's newspaper columns appears a discussion of the cure of cancer. McCoy recommends fasting; thus:

"If you will start using this fasting method as soon as you discover the first sign of a tumor, you may be assured of a complete cure."

Equally dangerous is the recommendation appearing in McCoy's column of the San Francisco *Daily News* for Feb. 8, 1927. In answer to a question as to whether people have cancer of the lips, McCoy states:

"Cancer of the lip is very common and is called epithelioma. The usual method of treatment is to use the x-ray or to remove the entire lip by surgery. In the ordinary case, however, the cure is very simple. In most cases, if the patient will go without food of any kind for ten days or two weeks, the cancer will separate from the lip and come completely away."

It is not necessary to enlarge on the deadly potentialities of such advice as this! If the two cases mentioned are extreme, it can be truthfully said that McCoy's advice on other subjects differs in degree rather than in kind.

A. J. C.

SYPHILIS NOT CAUSED BY VACCINATION

AMONG the most ridiculous of arguments urged by the antivaccinationists against smallpox vaccination is the claim that in some manner syphilis is caused by such inoculations. The story obviously arose from the fact that in the time of Edward Jenner and previous to his great discovery the only protection against catching smallpox was by inoculating the person intentionally with the disease from some other person. At that time there was little protection against either syphilis or smallpox and occasionally the former disease may have been transferred with the latter.

The three surgeons general of the U. S. Army, the U. S. Navy and the U. S. Public Health Service, Drs. M. W. Ireland, E. P. Stitt and H. S. Cumming, have just issued a signed statement with the hope of stopping once and for all this peculiar notion. In the first place, syphilis is a disease confined to human beings alone. As soon as the use of vaccine material prepared from the calf, instead of from the human being, became universal the possibility of transferring syphilis by vaccination was eliminated.

Since 1917, more than 4,700,000 men and women have been vaccinated in the Army, more than 950,000 in the Navy, and of these not one developed syphilis as a result of vaccination. In the same period the U. S. Public Health Service vaccinated 2,918,748 persons. Not one contracted syphilis as a result of vaccination. During the last ten years more than 2,000,000 persons have been vaccinated by state and local health authorities without a single case of syphilis. Thus a grand total of almost 11,000,000 persons have been vaccinated without a report anywhere of syphilis attributable to the vaccination.

Nowadays smallpox vaccine is a standard preparation passed on and regulated by the U. S. pharmacopeia and by the pure food and drugs law. It is especially passed on by the hygienic laboratory and the U. S. Public Health Service. The places in which it is produced are repeatedly inspected. In most of them the vaccine is never touched by a human hand in the process of production. This is the material that is used by doctors all over the United States in vaccinating persons against smallpox.

In the middle ages the person without the scars of smallpox upon his face was a rarity. Today the person who carries about these scars is the unusual person in the community. He is a living monument to stupidity, either his own stupidity in refusing vaccination on the numerous occasions when it must have been offered to him, or the stupidity of fanatical parents misguided perhaps by the literature of such antisocial persons as the editors of *Physical Culture* and members of the fanatical American Medical Liberty League. The eminent French physiologist Charles Richet described man as *homo stultissimus*, or idiot man, because, having knowledge, he did not use it for his own benefit.

M. F.

HOUSING AND TUBERCULOSIS

A SIGNIFICANT factor in human happiness is the type of residence in which a person lives. Since human health is fundamental to human happiness, physicians have felt that problems of housing were especially their province, as well as that of all other persons interested in the progress of the community.

Students of diseases of the heart in New York City have urged that the task of walking up five flights of steps in a tenement places too great a burden on a weakened heart. Investigators in other cities have protested against building tall schoolhouses without elevators for similar reasons. The child whose heart is not competent should not be compelled to make such fearsome climbs.

For years the impression existed that there were cancer houses and that persons who lived in such places were likely to die of this disease. In every instance a careful investigation showed that there was not the slightest reason for believing the place of residence had anything to do with the occurrence of cancer, so that this peculiar notion has been definitely consigned to the limbo of discarded things.

The place of residence may be important in relation to insufficient sleep. When several persons are crowded in one bed and when that bed is lively with night prowling insects insomnia is not infrequent. The occurrence of infectious disease is usually more frequent in crowded tenements than in well established homes, and even deafness has been found to occur with greater frequency in persons living under poor housing conditions.

Newsholme showed that the improvement of housing conditions and a decrease in overcrowding in apartments ran directly parallel with a decline in tuberculosis, but he added the statement that improved housing conditions do not always prevent an increase of tuberculosis.

For years the impression has been prevalent that tuberculosis occurs far more frequently in places where the dwellings are dark and damp, poorly ventilated and without access to sunlight or fresh air. Vladimir Cepulic, chief of the tuberculosis department in the government hospital and dispensary in Zagreb, Jugoslavia, has just completed an investigation of the deaths from tuberculosis in that city, charting every death according to the house in which it occurred. He is firmly convinced that such evidence as is available does not indicate that any special type of house is a breeding place for tuberculosis or that the germs flourish unduly in such homes as compared with others. He found that the primary cause of the constant occurrence of tuberculosis in certain houses was not the nature of the house but the nature of the persons within the house. The chief source of tuberculosis is a person with the disease who is careless as to the manner in which he exposes other persons. As was shown by Opie and his colleagues in this country, the focus of tuberculosis is a person who carelessly spreads his sputum containing the germs where other persons may come in contact with it.

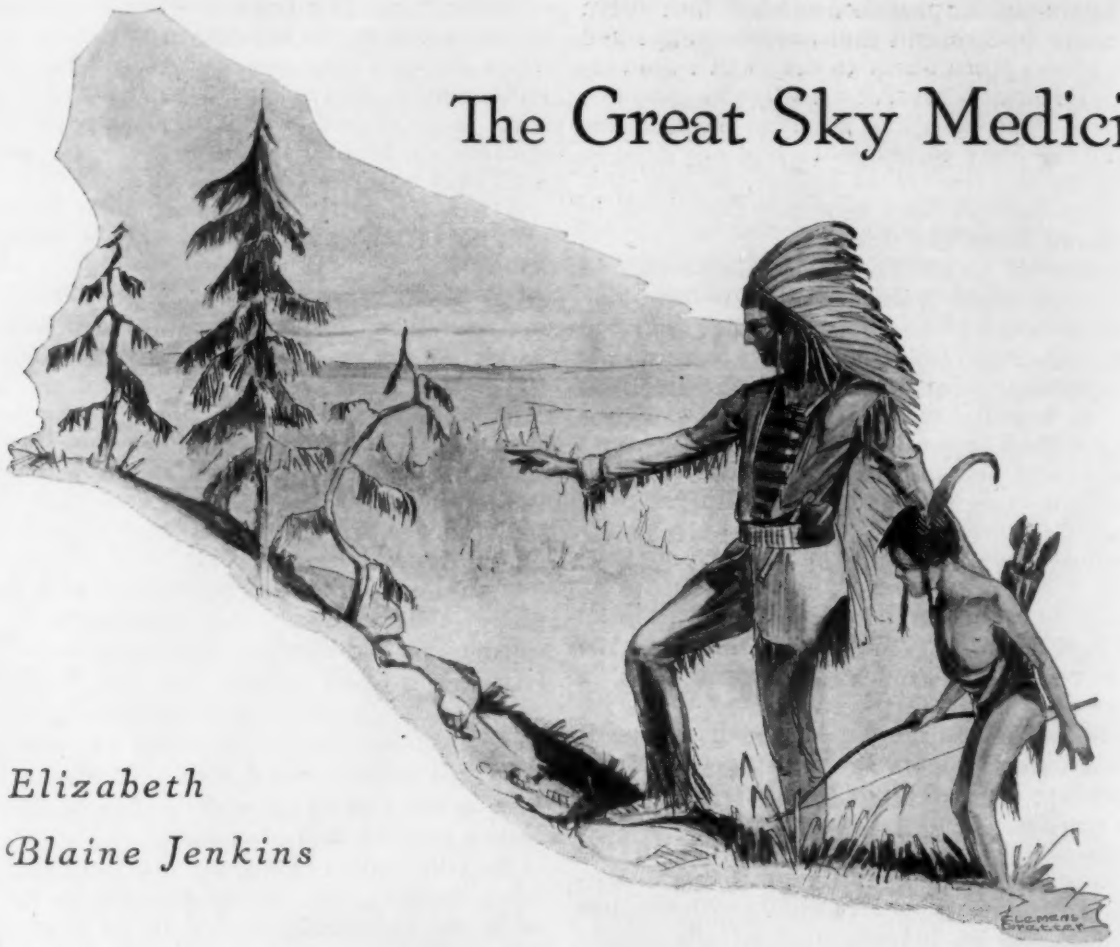
When a family with tuberculosis moves out of a flat or a home, the place may be disinfected by a thorough cleaning with soap and water. After such cleaning, the place is safe for any one else who may care to move in and he is in no danger of contracting tuberculosis from the surroundings.

"We must, once and for all," says Cepulic, "give up saying that some houses are breeding-places of tuberculosis; that tubercle bacilli are flourishing in them; that there are houses which are so much infected that tuberculosis is endemic in them and seeks new victims every day among both the old inhabitants and the people who have moved into them recently. We must give up believing that dark and unclean flats are a good ground for the existence of tubercle bacilli, and that the lack of light is more important for the development of tuberculosis than are overcrowded flats. Briefly, tuberculosis is not linked up with houses or flats; it is linked up with foci of disease."

As with tuberculosis, so also with all infectious diseases, the danger lies not in the home or in the surroundings, but in the contact with human beings who spread infection. Under conditions of overcrowding these contacts are far more frequent than when there is plenty of room. A person with an active infectious disease should be isolated and arrangements should be made for preventing the spreading of his excretions among those who are well. Of course, overcrowding is more common among the poor than among the rich. So also is bad nutrition. These are contributing factors of great importance in the spread of disease.

M. F.

The Great Sky Medicine



By Elizabeth Blaine Jenkins

SOMETHING happened a long time ago that is quite as true as things that happen today and you shall hear about it.

An Indian village stood on the shore of a wide blue lake. The lodges were two rows of young trees, bent together overhead and bound fast with strips of buffalo hide. The walls were made of the silken-gray bark of birch trees, and a round hole in the leafy ceiling let out a long blue banner of smoke that sailed away into sky-land. In one of the largest and handsomest of these lodges lived Cheeda, the son of an Indian chief.

Cheeda slept on a bed of pine boughs, covered with soft beaver skins. He wore a leather tunic embroidered in red and blue beads, and moccasins trimmed in beaded stars. In his black hair he wore an eagle's feather, so his playmates would not forget that he was the son of a chief. His skin was bronze and shiny like a new penny, and he lived out in the sunshine all day long.

It was early spring and the snows had melted away. The grass was already green in the hollows, and Cheeda hopped merrily on one little moccasin because he heard the first robin sing. He put on a new tunic that was covered with beaded flowers, stuck a red feather in his hair, and said to his squaw mother:

"I am wearing the pretty tunic you embroidered for me, because the birds are coming back from the south wind's country and it will soon be the moon of dancing flowers."

His squaw mother smiled and said nothing, but the big chief father declared: "It is good to wear a new tunic embroidered in beaded flowers, but it is better to grow tall and straight and strong, so that you may be a big chief like your father."

Now Cheeda wanted very much to be a big chief with beads and feathers on his blanket, so he asked: "What must I do to grow up tall and strong?"

His father pointed to three little pine trees. One was thin and humped like an old man. One was fat and twisted like an old squaw. One was sturdy and straight and lifted its head to the sun.

Cheeda

His big chief father said: "If you put your feet down firmly, with the toes pointing a little bit in, if you walk with shoulders straight and always look up at the sunshine, you will be straight and strong like the little chief pine."

Cheeda did not forget what his father said. When he went to the woods to play, he tried to hold his head up and to put his feet down firmly, so he would grow up like the little chief pine tree. He felt very happy when he walked proudly and looked up at the sun.

He felt so very happy that he cut reeds and made holes in them so that each reed made a bird note when he blew upon it. He bound them together and blew upon all the reeds, till it sounded as if birds were singing. He ran to show his new plaything to a pretty little Indian girl called Windflower, who lived not far away. He peeped in at her lodge door and played upon his pipes:

Cheer-i-lee! Cheeri-la! Coo-Coo!
Bob White! Pee-wee!

Windflower was sewing shells on a band for her head, but she left her work and cried: "There is my playmate Cheeda. He is trying to make me think he is a bird, but I see his new tunic behind the hawthorn bush." Then she ran out to play with Cheeda in the woods of spring.

Windflower

Cheeda thought Windflower was very pretty, for her cheeks were red as berries and her eyes were bright like sunlit water. She was straight and looked at the sunshine, like the little chief pine, so Cheeda said: "You shall be my little lodge-keeper when we grow up, for you are tall and straight, the way a chief's lodge-keeper should be."

Windflower replied: "But you must first build a lodge for me, as my father did for my mother."

So Cheeda and Windflower went into the woods and built a playhouse lodge, pretending that they were grown up. They made a little tree lodge with birch bark walls and filled in the chinks with pine boughs, just as their fathers did.

"North wind shall not creep into our lodge," said Cheeda and Windflower.

Then Windflower gathered sweet smelling grass and wove it into baskets, saying, "I must gather corn and roots and berries and store them in my basket, so we may have them to eat when winter comes."

Cheeda found smooth white clay and made bowls and baked them in the sun. "When I shoot a buffalo we shall eat buffalo stew out of these pretty bowls of clay," he explained.

Then they found a big hollow stone and carried it into the play lodge and put corn in it and pounded it into flour.

Windflower said: "How good it will taste when we make it into a porridge to eat when the north wind drives the animals into their winter dens."

Cheeda found the place where the beavers built their dam and he caught three big ones and tanned their skins and gave them to Windflower. She sewed them into curtains to keep out the north wind.

After they had made a round hole in the roof to let out the smoke, they stuck pretty red and blue feathers into the walls, and Cheeda said: "Now you must grow up and I must grow up, so we can keep house in our leafy lodge."

Every day they gathered wild strawberries and blueberries and other fruits and dried them in the hot sunshine. Cheeda speared a salmon and he dried that too, just as the grown-up Indians dried them, in the smoke of the fire. They strung roots on a thong and hung them on the walls, so they would have vegetables to eat with their buffalo stew. All their playmates came and admired the lodge that Cheeda and Windflower built to live in when they grew big and tall.

All summer long they worked, making their lodge ready for winter. Then the old north wind came snooping in at the lodge door. "Whoo—oo! Let me in!" it whistled, as it blew showers of golden leaves from the trees. The robins shivered and sang their faint whisper songs in the trees; then they flew away to the south wind's country.

The snow clouds came sailing out of the north and the old bear said: "I must make my bed deep in the rocks and go to my long winter sleep."

Beaver and chipmunk and squirrel built winter homes and hid themselves away from the old north wind. When they were all safe in warm nests, and Cheeda and Windflower were snug under buffalo robes in their fathers' homes, the old north wind howled like a hungry wolf and flapped the curtains of the lodges. It hurled snow at the village. It twisted the bare trees and stopped the song of waters.

All the village folk tightened their curtains and stuffed skins into the cracks where the cold came in, but the north wind hurled snow down the chimneys and put out the fires. It stayed

for a long, long time, until the animals and fishes hid themselves so far away that the hunters could not find them at all. After many such days, every one got hungry, for the warriors could find no meat.

They soon ate all the corn and roots and berries, even the food that Cheeda and Windflower had stored in their playhouse lodge. Every one drew his belt tight so he could not feel the teeth of the hunger wolf gnawing at his empty stomach. Cheeda drew his belt tight, too, and tried to walk as firmly and as straight as ever. He did not want his little playmate, Windflower, to become unhappy and discouraged.

Windflower had not eaten good warm food for such a long time that her cheeks grew pale and her eyes lost their sparkle. At last she drooped just like the little humped-over pine. She shivered under her buffalo covers and coughed all day long. This made Cheeda unhappy, for he was afraid Windflower would never lift her pretty head up to the sunshine again.

At last the north wind was driven away and the moon of flowers came back to the world. The birds and animals and fish came out of their hiding places, so the hunters found meat. The hungry ones straightened up and walked happily again, but Windflower did not straighten. She continued to grow thin and to cough. After a time she just sat quietly and did not play any more.

When Cheeda whistled on his reed pipe, Windflower ran happily to meet him.

Cheeda filled the baskets in their playhouse lodge, so it looked just as it did before the hunger wolf came, but Windflower was very tired and did not play at housekeeping again. This made Cheeda sad.

The medicine man put on an ugly false face and danced hard, for he was foolish and thought he could dance the sickness out of Windflower's bones. He did not know that the hunger wolf and the north wind had made her droop like the humpy little pine.

At last Cheeda said: "I must find the way to make Windflower straighten up again and look at the sun."

He went to the lodge of an old wrinkled squaw who told beautiful stories and asked her how he might cure Windflower of the sickness. The old squaw replied: "Listen to this story, then you will know."

And this is the old squaw's tale:

"Up in the sky there is a land of light. All good Indians go there when they die and live happily with the birds and animals and fish. One day their big chief said: 'The men down on earth are getting thin and weak. Some one must take sky medicine to them.'

"'I will fly down with it!' said the birds.

"'I will swim down with it,' said the fish.

"'I will run down with it,' said the animals.

"They all tried to take sky medicine to earth but not one could break through the sky to earth. An old crow sat there, saying nothing, but pecking hard.

"The birds, the fish, and the animals said: 'Look at crazy crow trying to peck a hole in the sky!'

"The old crow pecked on. At last he pecked a big round hole in the sky, and let sky medicine through to give health and strength to earth men."

Cheeda thought about the old woman's story for a long time. One day, when he heard for the first time a robin singing in early spring, he walked through the woods toward Windflower's lodge. Suddenly the sun peeped at him through the pine trees; it was round and bright. Cheeda was so excited that he shouted with joy:

"Hi—Yi! I have found sky medicine! The sun is the hole in the sky where the spirit light shines through and brings health to men!"

He ran at once and told his father and Windflower's father and all the villagers. His father, the big chief, ordered: "Put Windflower out in the sunshine every day and let us see if sky

medicine will make her lift up her head and walk again like the little chief pine."

Every day they made a bed of boughs out in the sunshine, so sky medicine could shine on Windflower all day long. She covered herself with buffalo robes and tried to eat good warm food, so she would get plump again. It was not long until she ate her food without trying so hard, and then she did not have to try at all.

Cheeda came and played bird songs on his flute and watched to see if Windflower would lift her head. After a time she began to get strong and to lift her head, just like a thirsty little flower after a rain. Then one day something happened that made Cheeda very happy.

When he whistled on his reed pipe, Windflower ran to meet him as happy and as straight and tall as the little chief pine.

She laughed merrily, as a little girl should, and said: "Oh, how I should love to play in our little lodge in the woods!"

Cheeda leaped up into the air for sheer joy, and cried: "Sky medicine has given me my happy little playmate again!"

After that Cheeda and Windflower were very happy again.

The very nicest part of this story is that any little girl who droops and fades, as Windflower did, can be made well and happy by the great sky medicine, the big, warm, wonderful sun.

The Vegetable Children

SCHOOL boys and girls of Oskaloosa, Iowa, have had great fun with the vegetable children. Besides Cry Baby Onion, Little Polly Peas and Letty Lettuce, there are Goodie Beet, Good Scout Spinach, Charlie Carrot, Ruby Tomato and Farmer Bean.

Their health teacher, Miss Esther M. Albright, made the original posters from magazine paper dolls dressed in bright clothing cut from seed catalogues. The dolls are from Grace Drayton's Dolly Dingles and are reproduced here by the permission of Miss Drayton and her publishers.

The school children copy the posters, learn the health rhymes and become real companions of the vegetable children. In their original colors the posters are very attractive.

CRY BABY ONION

There! There! Cry Baby Onion,
You need not cry that way,
You will spoil your pretty ruffles;
Wipe your tears and come and play;
The children all will like you,
When they learn you bring them LIME,
To make them strong and sturdy,
Then they'll choose you every time.

LITTLE POLLY PEAS

Why, Little Polly Peas!
We are glad to see you here,
We know you are the children's friend
And you'll help them all the year.
In building sturdy bodies,
You will always do your share,
In summer time or winter time,
You are busy everywhere.

LETTY LETTUCE

Little Letty Lettuce
With your skirts of ruffly green
Growing crisp and dainty
With leaves of silver sheen;
Come visit in our garden,
Come early every spring,
For we need you, Little Letty,
And the VITAMINS you bring.

New Books on Health

Reviews of Interest to General Reader, Parent and Teacher

FOUR THOUSAND YEARS OF PHARMACY

By Charles H. LaWall, Ph.M. Cloth. Price, $5. Pp. 665, with illustrations. J. P. Lippincott Company, Philadelphia, 1927.

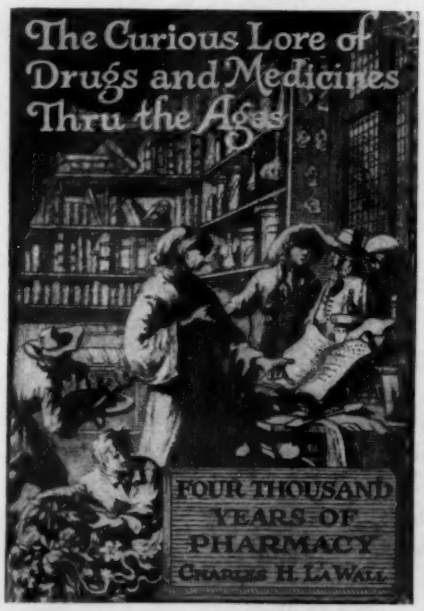
SOME time before Tut-Ankh-Amen concluded his reign in ancient Egypt, the physicians who practiced under the protection of the gods Isis and Osiris were writing prescriptions to be filled by the ancient Egyptian pharmacists. The time was about 3700 B. C. Indeed, there is a prescription on a stone tablet in the Metropolitan Museum in New York for the preparation of a vapor for inhalation. Perhaps the patient able to carry home that type of prescription was hardly in need of the drugs. The Bible also discusses numerous prescriptions and there are certain historical remnants assigned to the pre-Christian era, indicating a wide adaptation of herbs and fruits and of the extracts of animals to the curing of disease.

For 3,000 years the art of the pharmacist, like that of the physician, was intimately bound with healing by faith. To a presentation of the history of the development of pharmaceutical knowledge, Dr. LaWall devotes himself in his interesting volume. His earlier chapters are beautifully illustrated with facsimiles of the type of pages and drawings of ancient books of pharmacy. He traces the growth of this art from the earliest times, through the empirical practice of the middle ages to the famous discoveries of the fifteenth century. He presents interesting pictures of the fathers of modern pharmacy and of the preparation of early herbals and pharmacopeias.

With the beginning of the seventeenth century, drugs began to be studied scientifically; quinine and laudanum found their place in medical practice. The quacks of the period developed preparations that were soon adapted to scientific purposes. One of the most interesting sections of the volume is the one in which Dr. LaWall quotes from most of Shakespeare's plays to show how the great dramatist revealed the practice of the times.

It is a far cry, however, from the science of the seventeenth century to that of the eighteenth and nineteenth centuries, for with these came an intimate relationship between the basic sciences, chemistry, physics, pharmacology and bacteriology, which made not only medicine but every branch associated with the practice of scientific medicine an actual science. Dr. LaWall concludes the presentation of his history with a fine estimate of the place of historical study in affording a perspective:

"Every calling, trade, art, profession has a history. The influence of the past upon the present is in direct proportion to the wealth of tradition and of history that has been handed down through successive generations. Progress is frequently measured in terms of respect for those who have preceded us and who have left us landmarks to guide our way. Let us not be vainglorious in the pride of our present achievements. Let us not look with disdain or ridicule upon the ignorance and credulity of much of the past."



Jacket cover of Dr. LaWall's outline of pharmacy.

For those who wish to delve deeper into the subject so attractively presented in this interesting volume, the author provides an excellent bibliography and a chronological table. He writes with a fine sense of humor and with a journalistic instinct that helps to make his book a readable contribution to general knowledge rather than an erudite tome for a few specialists in history.

MORRIS FISHBEIN, M.D.

THE FUNDAMENTALS OF SCHOOL HEALTH

By James Kerr, M.D. Cloth. Pp. 852, with 163 illustrations. Printed in Great Britain. The Macmillan Company, New York, 1927.

IF THIS extensive volume is a criterion of health efforts in the British public schools, progress in the care of the school child over there is well up to any of the attempts that are being made in this country. It is significant, however, that the majority of illustrations and examples for Dr. Kerr's volume are drawn from American sources. He covers every aspect of the care of the health of the child in school, beginning with heredity and including not only personal and general hygiene but also intelligence, sex education and similar topics. The chapter on medical inspection provides information as to systematic organization; one on the health of teachers will be interesting to all educators, and the concluding chapters on buildings, ventilation, warming and illumination are generally quite satisfactory.

Unfortunately, the author is primarily concerned with the British regulations in these matters, which are discussed to the detriment of a general point of view.

MORRIS FISHBEIN, M.D.

THE NORMAL CHILD

By B. Sachs, M.D. Ed. 1. Pp. 111. Price, $1.50. Paul B. Hoeber, Inc., New York, 1926.

"THE Normal Child" is a pleasantly written book, well bound and with large print. It contains an introduction and chapters on infancy, the nursery and preschool period, the school age, puberty and adolescence, and the evils of psychanalysis.

The book expresses quite well the views of medical men who deprecate what is known as the "newer psychology." The author is perturbed over the modern tendencies in child training and in psychology, and is especially anxious to warn parents to avoid too much emphasis on sex.

Almost one third of the book is taken up with a sweeping denunciation of psychanalysis and its "salacious" doctrine.

The author urges parents not to trouble themselves about the sex instinct until the child reaches the age of adolescence. "It is far more important," he says, "that parents very carefully lay the foundations to character at this early age than to trouble themselves about this sex instinct." The author goes counter to the almost unanimous opinion of those interested in mental hygiene when he advocates that parents should not give their children sex education until about the age of puberty. Instead of telling the children the honest truth about birth, he says: "It is better for the parent to adopt or invent some reasonable explanation than to allow the child to be misinformed by ignorant or evil-minded comrades." One wonders why the author asks the parent to invent an explanation about an established fact. Why not tell the child the honest truth?

The author's advice concerning the various problems that confront parents other than sex is vague. He relies strongly on maternal instinct. He says: "Let nothing supersede maternal instinct tempered by experience and common sense." Again he says: "A sense of obedience should be developed by treating the child in a spirit of sweet reasonableness. Do not let the child feel that by crying or whining he gains mastery over the parent." Parents are no longer satisfied with such generalities.

The author seems to feel that modern methods consist of a morbid probing into the child's life rather than a sympathetic study of the child and his environment and a common-sense adjustment of the home and school life. He says: "A little less analysis of character and a little more common sense would be beneficial. I have in mind the behavior of a robust girl of thirteen who terrorized an entire family group by yelling to the point of exhaustion when things did not go her way. There were a few minor points that needed adjustment in the family relations, but instead of continuing all sorts of analyses, the young girl was made to feel that these yelling spells would have to stop for her own good, that she would have to yield to superior authority in the end; and the spells stopped." However well this symptom of screaming may have been overcome by the method of repression, the method is not calculated to get permanent results.

The author is not specific enough in guiding the parents in dealing with the ordinary problems of childhood. The modern parent wants to know the ages at which a child can be taught to do various things and accept responsibilities; how a child may be trained in obedience; the effects of the various routines on the child's behavior.

SMILEY BLANTON, M.D.

A sixteenth century pharmacy; before the days of soda fountains.

MODERN SCIENCE AND PEOPLE'S HEALTH

Edited by Benjamin C. Gruenberg. Six contributing authors. Ed. 1. Cloth. Price, $2.50. Pp. 250, with illustrations. W. W. Norton & Co., New York, 1926.

FREEDOM of thought is essential to progress, just as essential as freedom to experiment in the laboratory and to apply the results of these experiments to manufacture better radio tubes, to build better electric engines, or to produce healthier children, men and women. Surely, in a democracy we should find fertile soil for the applications of science. But the democratic spirit may also foster ignorance because we feel free to believe what we wish to believe.

In no field is this so striking as in that which relates to health. Profound ignorance is displayed by those who have high intellectual attainments almost as frequently as among the less well educated portion of our population. We too frequently believe what we wish to believe. It is true that scientific discoveries are sometimes shrouded in scientific language, but if knowledge concerning health is really desired, it can be found in such books as "Modern Science and People's Health."

Start with Chapter II and the discussion of the laws of inheritance and the effect of the environment on the life of the individual. Continue through a perhaps too technical discussion on drugs to the clear statements of the fundamentals of nutrition. Read something of the development of the nervous system and the historical résumé of our knowledge on the control of certain communicable diseases. Peruse, not too rapidly, the definite statements on the application of scientific knowledge to the prevention of disease given in the chapter entitled "Scientific Service and People's Health." Then turn back and read Chapter I, an essay on science in a democracy.

J. F. NORTON.

A PRIMER FOR DIABETIC PATIENTS

By Russell M. Wilder, M.D. Third revised edition. Cloth. Price, $1.50. Pp. 126, with illustrations. W. B. Saunders Company, Philadelphia, 1927.

DIABETES is a disease in which the success of methods of treatment depends largely on the patient's cooperation. If the patient is intelligent, he can greatly prolong his life. If, on the other hand, he fails to aid the physician in accurately recording the progress of the disease and in adapting the dietary to the functional capacity of his tissues, he is likely to have a much more unsatisfactory existence.

The purpose of such books as Wilder's primer is, therefore, not for self-treatment but wholly for cooperation. While Dr. Wilder introduces the subject with a brief consideration of the disease, the main body of the text has to do with simple tests of the excretions and numerous chapters on diets. The section on insulin is thoroughly worked out, and the three succeeding chapters discuss the early signs and the serious complications. The remainder of the volume is wholly dietetic, having to do with the presentation of good recipes and valuable statistical data.

MORRIS FISHBEIN, M.D.

News *and* Views

from the Field of Health

TRAVELING SHOWS MAY SPREAD SMALLPOX

Circuses, carnivals and similar traveling shows are considered by the Surgeon General of the U. S. Public Health Service a definite factor in the interstate spread of smallpox. Local health officers are advised to investigate the itinerary of such shows and if they come from smallpox infected territory, all employees should be examined for evidence of vaccination.

SUICIDES REFLECT MENTAL ILL HEALTH

The fact that bad adjustment and mental ill health are common among people who are generally considered normal should be remembered in connection with the recent suicides among college students, advises Dr. Madison Bentley, professor of psychology at the University of Illinois.

Several universities and colleges are at present engaged in discovering and relieving these very conditions of maladjustment among their students. The question as to whether there really is an increase in the suicide rate among college students cannot be settled without statistical inquiry, Dr. Bentley asserts.

WHAT TO DO FOR SPRING FEVER

Spring fever is not a disease but an experience, declares the Indiana State Medical Association. No one is immune to this fever, for it attacks all classes, old and young, office worker, housewife and school child. Nor has medical science, in spite of its victories over yellow fever, typhoid fever and scarlet fever, ever been able to make the slightest impression on this fever.

A general languor, a desire to let down, a preference for fruits and vegetables, a distaste for meat and heavy foods, and most of all a longing for the outdoors characterize this fever, though it is so well known as scarcely to need any description.

Through the years a notion has persisted that not only our houses but our bodies needed spring cleaning, and spring brought around the soap suds and scrub brushes and the good old sulphur and molasses, sassafras or "yarb" tea. Neither a house nor a human body can be kept in good condition by such spasmodic attention.

The wisest course is to yield to those very desires that characterize spring fever. What we need is more sleep, more outdoor exercise, more fresh air and more fresh fruits and vegetables. Dosing with home made or commercial spring tonics will do little more than upset the stomach and make spring a time to be dreaded when it should be enjoyed.

The wise person knows that the call to the outdoors should not be denied.

PSYCHOLOGY AIDS SAFETY IN FLYING

The exceedingly low mortality rate in the American flying service is due to the rapid advances that the United States has made in the psychologic study of its future fliers, declared Major Francis H. Poole, chief of the school of aviation medicine at Brooks Field, Texas, according to *Science*.

In the United States only about a dozen lives were lost during 1926, while in England in eleven months of that year there were eighty-one deaths and fifty-one accidents. In Major Poole's opinion, 90 per cent of all accidents are due to the pilots and not to the construction of the plane, for the machines today are almost foolproof, but emotional stability is the most important single characteristic of a good flier.

Because signs of nervous unbalance often do not show on the surface, each applicant is now subjected to a searching personality study, in addition to machine-made tests and physical and mental tests.

It is very much easier to find good mechanics than to determine which men will make good fliers.

HOW CHILDREN SPEND THEIR TIME

The average California school child divides the 8,760 hours of the year between 1,000 hours for school, 2,029 hours for sleep, and 750 hours for eating and cleanliness. This leaves him 4,090 hours for leisure time activities. The great need for supervised recreation for children is thus strikingly shown, observes Will C. Wood, state superintendent of public instruction.

SANDWICHES INVADE INDUSTRY

Sandwiches may be considered one of the leading industries of America, with a revenue of about $70,000,000 yearly, according to *Baking Technology*. This popular form of food or refreshment takes its place along with automobiles and movies.

Statistics gathered in New York City, where presumably sandwiches are no more popular than in many smaller cities and towns, showed that almost a million sandwiches are consumed in a day in the Broadway restaurant district alone. The number consumed for lunch and dinner are of course augmented by those eaten as late evening refreshment.

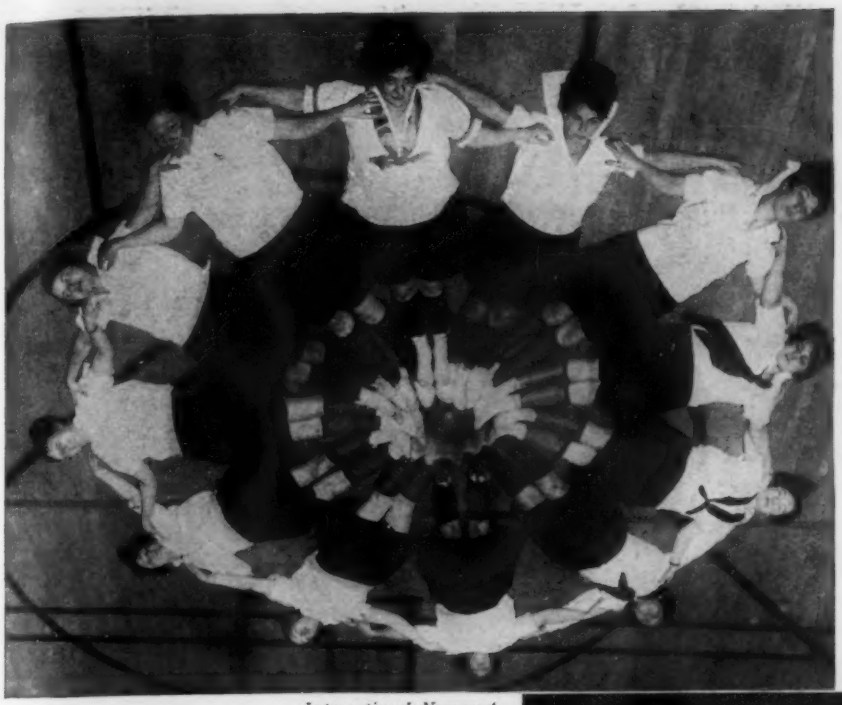
If one figures at an average cost of 20 cents a sandwich, which is extremely moderate, the daily sale amounts to $200,000 and the yearly consumption to about $70,000,000.

MAN MAKES HORSEPOWER RECORD

The expression, "as strong as a horse," is not, of course, actually true, but recently a man was able to generate the record amount of 1.87 horsepower, reckoned according to the engineer's horsepower unit.

This was done in an experiment at McGill University, Canada, where a young man, from a running start, ran rapidly up a flight of steps 7½ feet high. The horsepower decreased as the height of the steps increased.

Ordinarily the power production of a human laborer is probably not more than one tenth of the engineer's horsepower unit.



International Newsreel

GIRLS' WHEEL OF PROGRESS

Girls in a New York City Y. W. C. A. gymnasium present this as their conception of the wheel of progress.

FOUND: THE PERFECT BABY

At 9 weeks little Mildred has been chosen by fifteen physicians as the finest baby in the country. Her bodily condition is so splendid as to be termed perfect.

Pacific and Atlantic

Pacific and Atlantic

THE NATIONAL RIFLE MATCH TITLE MAY BE WON this year by these co-eds of Washington, D. C.

Underwood and Underwood

CHILDREN ENJOY INDOOR BEACH

Here is a substitute for beach life, with electric rays shining on these Berlin children to make them strong and healthy.

100 YEARS AND NO FALSE TEETH

This citizen of San Francisco who has just passed his hundredth birthday still has all his own teeth.

Pacific and Atlantic

Pacific and Atlantic

SCHOOL BIRDS

The presence of a canary bird in the classroom promotes the discipline and mental efficiency of the pupils, says teacher.

Pacific and Atlantic

TEST SUPERSTITIONS

To test the worth of popular notions concerning drugs the group of medical students shown here voluntarily took capsules, the contents of which were known only to the physician conducting the experiment.

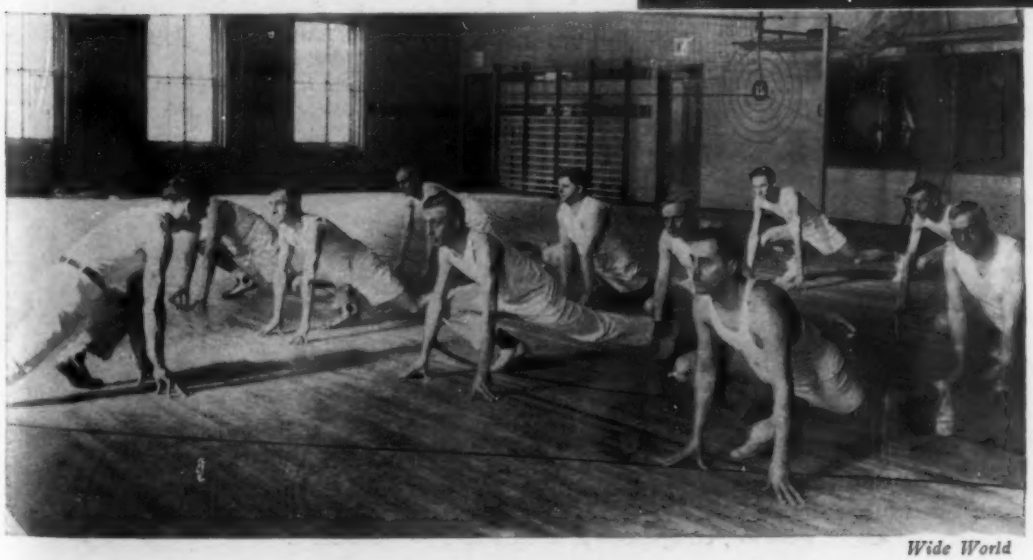
Underwood and Underwood

FROG TO CURE HEADACHE

A dried frog tied against the forehead is still considered a headache cure by many inhabitants of Peru, who frequent this market drug store for charms and herbs to cure sickness.

MINISTERS TRAIN IN GYM

A physical training class of twenty-five ministers was recently formed in a Chicago Y. M. C. A. and is reported a decided success.



Wide World

LATEST DEVELOPMENT IN ROAD HOTELS

Motels are the most modern development for the care of motor tourists. A string of seven of these road hotels is being constructed on the west coast between San Francisco and Portland and they will provide comfortable and sanitary quarters for travelers.

The motel has a main office and dining room and individual bungalows and garages for guests. Each bungalow has a bath. Thorough cleaning is done after the departure of each guest. The fee for lodgings and meals is said to be small.

The scene below is of the patio surrounded by bungalows. This motel is near San Luis Obispo, Calif.

Ewing Galloway

Ewing Galloway

PROVE TWINS ALIKE MENTALLY

Another popular belief has now been given scientific backing. Twins have long been credited with similar mental attributes as well as similar physical ones. Actually they are twice as much alike mentally as brother and sisters of different ages, according to experiments conducted at Columbia University and reported to the American Psychological Association.

Twins of the same sex are more alike than boy-girl twins, and those of the same sex that look alike are even more alike than those distinctly different in appearance. The study included 158 pairs of twins, sixty-three pairs of whom looked so much alike as to be almost indistinguishable. The mental ratings of the twins were compared with the ratings of brothers and sisters whose ages were from one to four years apart.

HEALTH EXAM BENEFITS POSTAL EMPLOYEES

Real benefits, in the discovery of unknown physical defects or other conditions that might lead to impaired health, accrued to the postal employees who availed themselves of the opportunity for periodic physical examinations, reports the *Postal Record*.

Questionnaires sent out indicated that the employees themselves were sensible of these benefits as many had returned for a second and even third examination. One hundred stations for these examinations have been established, this being twice the original number.

INDUSTRIAL ACCIDENTS AT DEFINITE HOURS

Industrial accidents occur during the first two and last two hours of the working day, according to Dr. W. L. Hartman, writing in the *National Safety News*. Financial difficulties, sickness in the home and other outside matters divert the worker's mind from his work during the first two hours. During the last two hours accidents are due largely to fatigue and might be prevented by proper physical and mental care.

ROOM WITH BATH POPULAR NOW

Everybody wants a room with a private bath nowadays and hotel people are hard put to it to rent rooms without, reports the Des Moines *Tribune-News*. No price is too high for people to pay for a room with bath and no price is low enough to make them take one without, complains a hotel man.

SAFETY ON THE RAILROADS

Since 1913, American railroads have conducted such a successful safety campaign that the number of passengers and employees killed and injured has been reduced by more than half. The Harriman gold medal for the most conspicuous accomplishment in accident prevention among all American railways has been awarded to the Union Pacific System.

During 1925 not a single passenger was killed in the 53,000,000 locomotive miles over which the trains of the system operated. The safety work of this system has saved in the last four years 2,881 employees from death or injury.

By July of this year at least 8,000 miles of railroad, much of it in the most congested parts of the country, is expected to be supplied with some form of automatic train control for the prevention of accidents, according to the chairman of the Interstate Commerce Commission.

Questions *and* Answers

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed.

Hair Food

To the Editor:—Is olive oil beneficial to the hair and scalp? Can you name an oil or hair food that is really beneficial?

L. H., Iowa.

Answer.—There is no such thing as a hair food in the sense that, being rubbed on the scalp, a substance really nourishes the hair roots. No oil or any other material is absorbed in the skin in such a way as to do this.

There is no objection to using oil on the hair when the natural secretion from the skin is deficient and the hair tends to be dry. When this is not the case, oil should not be used.

Castor oil, two parts, mixed with alcohol, one part, has been much used as an application to the hair and is often satisfactory. There is no objection to olive oil if it is found agreeable.

Tuberculous Infection from Milk

To the Editor:—A friend on a farm writes that their cow has reacted positively to a test for tuberculosis. She is greatly frightened fearing that her three healthy children, 3, 5 and 7 years old, are doomed. She has been told that tuberculosis contracted from drinking an infected cow's milk attacks the bones of children. What shall I tell her?

E. P. E., Michigan.

Answer.—Many children become infected with tuberculosis from the milk of tuberculous cattle. Tuberculosis as seen in young children is frequently of the glands and in the bones. The majority of children so infected, however, are able to resist the infection.

Children should be given only milk from cattle known to be free of tuberculosis or, when there is any danger that the milk is infected, boiled or pasteurized milk. When pasteurized or boiled milk is given to infants, orange juice and cod liver oil should also be given.

As to the healthy children, the mother should not worry, but simply keep careful watch over them and have them examined at intervals by a competent physician, so that in case any active tuberculosis develops proper treatment can be instituted.

Skin Irritation

To the Editor:—I am taking electric needle treatments for the removal of superfluous hair. Is it all right to use zinc oxide on the treated places, or should they be allowed to heal without any? I should like to know if massaging would help the skin after the places are healed and the scabs gone?

S. H. B., Pennsylvania.

Answer.—It is not usually necessary to apply any material to the skin after an electric needle treatment for the removal of hairs. When skin irritation does result, any bland ointment, like zinc oxide, is usually proper, but to be safe, and if any scabs form, one ought to have them prescribed for by a physician.

Ammonia Odor of Urine

To the Editor:—My grandchild, a boy of 15 months, is considered perfectly healthy. He was inclined to be constipated, but seems to have regular bowel movements now. His urine smells so strongly of ammonia at times that it makes my eyes smart. Our doctor says he is all right and it will clear up, but I am not satisfied. At times it does not smell at all, and then again you might think his clothes were steeped in ammonia. Can you advise be about this condition?

H. W. I., Wisconsin.

Answer.—In the absence of any signs or symptoms other than the mere odor of the urine, there is nothing to worry about. The urine of a rapidly growing baby is apt to be of rather high specific gravity and to undergo such ammoniacal change.

The child should be encouraged to drink water freely so as to dilute the urine. That will probably be all that is necessary. The doctor will advise if anything more is required.

Rattlesnake Egg in Stomach

To the Editor:—A young man drank some water from a stream that had a rattlesnake egg in it. This egg in time matured on the food that he consumed. I understand that the snake has not assumed full growth, but x-ray pictures show it is there. What is to be done to get rid of it without killing the man? Is this story plausible or not?

L. P., Wisconsin.

Answer.—Such a sequence of events would be out of all accord with possibilities.

An egg of a rattlesnake, or of any snake, taken into the stomach would be destroyed by the digestive process and never come to maturity.

Condiments

To the Editor:—I am interested to get authoritative information as to the nature and extent of the injury caused by eating a considerable amount of such condiments and highly seasoned foods as vinegar, home-made chilli sauce and commercially prepared mustard and ketchup. Is there any definite relationship between any or all of them and ulcers and cancers of the stomach? In the light of what is known about them, would it be advisable to avoid them entirely? If not, with how many meals a week would it be permissible to use them? Should children have them at all, and if so at what ages?

F. H. B., New York.

Answer.—Little research has been done on this subject. Recently at one of the large clinics 100 patients with peptic ulcer were questioned in regard to their fondness for condiments and no evidence was obtained to indicate that they used them to any greater extent than the average American does.

The most irritant of all the condiments is probably the chilli-pepper; our Mexican neighbors, men, women and little children, consume large quantities of these peppers every day and yet, so far as can be judged from the experience of physicians practicing among these people, they are not particularly subject to ulcer.

In some persons the digestive tract is highly sensitive to condiments, but so far as is known the

reactions to their use are transient. A person soon learns that he cannot take these things and, if he has judgment, he leaves them alone.

It does not seem likely that vinegar would ever cause any trouble because it is weak as compared with the acid normally present in the stomach.

Normal children with good digestions and no idiosyncrasies to food ought to be able to take condiments as soon as they go onto a full diet.

Height of School Buildings

To the Editor:—The single story idea in school construction is well established in Georgia, as a result of the emphasis that we have put on it for the last eight years, but there are a few school boards that still have an inclination toward the building of two or more stories, mainly because they think that such a building will look more imposing, especially for high schools. I feel that in addition to the reasons of safety from fire and panic dangers and of general convenience in the operation of the school that would apply to elementary and high school alike, there is a health reason for the single story building, to prevent girls of adolescent age from the undue physical strain of climbing stairs as often as would be necessary in school usage.

E. G. H., Georgia.

Answer.—It seems desirable that school buildings for the elementary or the high school grades should be limited, when the cost of land is not excessive, to three stories at least, and to two stories when such a plan can be carried out.

The strain involved in climbing one flight of stairs is not serious for girls at any age. In a few instances, young children or adolescents with serious heart disorders or with crippled bodies find it difficult to climb one flight of stairs, but in such cases arrangements can easily be made to avoid stair climbing.

Some of the best authorities in school administration believe that there is no advantage of the one story over the two story school building. The tendency in one story buildings is to construct them of cheap material so that they do not represent careful planning and substantial construction. With cheap construction the cost of maintenance is relatively high. The floors are cold, and when artificial heat is needed, even for brief periods of the year, the cost of fuel is excessive in one story buildings because of the relatively large exterior surface area.

The arguments then, at the present time, seem to be largely in favor of buildings at least two stories in height.

Jaw Slips Out of Joint

To the Editor:—I wish to know what is the cause of the jaw slipping out of joint, and what can be done to prevent it.

D. J. C., California.

Answer.—Dislocation of the jaw almost always occurs on both sides and in a forward direction. Dislocation in other directions only occurs from great violence.

Dislocation is the result of either external violence, as in the pulling of teeth or in trying to force a large object into the mouth, or, much more commonly, of muscular action when the mouth is widely opened, as in yawning, laughing, coughing or vomiting.

With some persons in whom the socket of this joint is shallow, dislocation may occur easily. Such persons usually learn to reduce the dislocation themselves. In extreme cases certain operations have been done that aid in preventing the dislocation.

Erysipelas

To the Editor:—My husband has had erysipelas frequently twice a year over a period of nearly eight years, beginning when he was about 45, and occurring always in the same place, the left leg below the knee. Since his last attack, I have been making strenuous effort to find out the cause of these attacks, whether the infection remains in his system during the time when he is free from them, or whether he gets the infection from some outside source. I should like some information as to the hardiness of the germ streptococcus, whether it will remain in a dormant state during a period of several months and whether ordinary means of disinfection will destroy it.

E. M. P., Ohio.

Answer.—Erysipelas is usually due to a streptococcus, but it has been produced by other bacteria. It is well known that streptococci may remain in the tissues locally for several months and longer than most bacteria. Streptococci have been found in mild chronic inflammatory conditions of the skin and are present frequently in the nose and mouth. Recurrent attacks of erysipelas are probably due to an individual tendency, but may be due to the prevalence of a virulent organism. There is no certain method of prevention. Scratching of the skin might predispose to recurrent attacks, since streptococci are sometimes carried beneath the fingernails. Keeping the skin soft, clean, free from irritation and perhaps protecting it by a soft bandage probably would prevent infection better than the use of disinfectants; however, disinfectants might be applied under supervision of a physician.

Thorough physical examination might reveal the source of infection. Medical treatment would perhaps improve the general condition so as to render the patient less susceptible to recurrent attacks.

Ringworm

To the Editor:—Do ringworms cause the eruption from within or without? Does iodine heal the eruptions effectively?

P. V., Indiana.

Answer.—The parasite that causes ringworm gains access to the skin from without.

Iodine sometimes destroys the germs and cures the eruption, but frequently it does not.

Inoculation Against Scarlet Fever

To the Editor:—Is it advisable to have children inoculated against scarlet fever?

S. B. H., California.

Answer.—There is still some difference of opinion as to when the prophylactic injection of serum for scarlet fever should be used. The protection following injection of scarlet fever antitoxin is at best transient, lasting only a few weeks, and should not be given except when contact with scarlet fever makes infection quite probable.

Perhaps the majority of physicians would agree that it is not warrantable to urge its universal use among children but that, when scarlet fever appears in a community, children should be tested by it as to their susceptibility to the disease and those who are susceptible should be given prophylactic injections of toxin (vaccination).

Radium to Arrest Hemorrhage of Uterus

To the Editor:—Will radium pack arrest hemorrhage of the uterus?

L. M. S., Pennsylvania.

Answer.—Radium is being used effectively to diminish hemorrhages from the uterus. Whether it is the best treatment in a particular case, only the attending physician can determine. It should be administered with great care and only by an expert.

Rupture

To the Editor:—What causes rupture near the navel on the right side after an operation for appendicitis? Will the rupture heal without operation if one wears a belt, and if so in what length of time do you think it will be likely to heal? The rupture is about the size of a hen egg.

E. S., Alabama.

Answer.—The appearance of a rupture in the scar after any abdominal operation is known as a

ventral hernia. Usually the wearing of a pad is all that is necessary unless it tends to grow larger, in which case a second operation is frequently done. Whether this is advisable in the particular case, only the attending physician can determine.

Disturbance of Digestion

To the Editor:—Is it excessive acidity that makes the mucous membrane of the mouth peel when a person eats candy? The young woman who experiences this says she eats very little candy. A. F. P., Kansas.

Answer.—Excessive acidity is an indefinite term. There is no such thing as actual acidity of the blood, which always remains alkaline though the degree of alkalinity varies. Disturbance of digestion of any sort, such as by eating sweets, which disturbs some people, might readily produce a disturbance of the mucous membrane of the mouth.

Pasteur Treatment for Rabies

To the Editor:—Will you please send information on the Pasteur treatment for mad dog bites? Are these treatments dangerous to children, especially if it is not certain that the child had been scratched or bitten by the dog? When it is known that a dog has gone mad and a child has played with it up to three days of the time it went mad and it had often scratched and bitten the child in play, would you advise this treatment? Is there danger of paralysis from the treatment? How long before the dog shows the symptoms of hydrophobia can rabies be given? Does a child receive the same number of treatments as a grown person?

A. N. W., Missouri.

Answer.—The Pasteur treatment is not any more dangerous to children than to adults and may be given even if there is no evidence that the child or the adult has been scratched or bitten by the dog or other animal.

A dog is capable of spreading the infection at least eight days before any symptoms of rabies are manifest. Because of this fact an animal that has bitten a person must be confined for a period of ten days. If at the end of that time the animal is well, there need be no fear of rabies and Pasteur treatment will not be necessary. Should the animal show symptoms of rabies within that time, the person or persons whom it has bitten or scratched should receive the Pasteur treatment.

Paralysis following the Pasteur treatment is a rare complication and in most instances is transitory.

The same number of treatments is given to a child as to a grown person. In some instances the size of the dose is diminished according to the age of the child, but the practice in many Pasteur institutes is to give the same amount in each dosage to child and to adult.

Should the dog be inadvertently killed, after having bitten a person, the head should be removed in its entirety and sent to the state or city laboratory for examination for rabies. Such an examination may prove negative and in such case the question of administration of the Pasteur treatment must be established by the symptoms of the animal at the time of biting. If these were suspicious the Pasteur treatment should be given.

Cuticle Peeling

To the Editor:—What makes the skin around the nails peel continuously? Is this the condition known as salt rheum?

T. A. R., Missouri.

Answer.—It is impossible to say what makes the skin around the nails peel continuously in any particular case. Perhaps the most common cause would be eczema, for which the term salt rheum is often used.

Hookworms

To the Editor:—What are hookworms and how do they enter the intestines? What are the symptoms of and what is the remedy for them?

P. V., Indiana.

Answer.—Hookworms are of two varieties. They cause the disease known in this country as ankylostomiasis, which is characterized by anemia, debility and heart weakness due to the absorption of the toxins from the parasites.

Almost invariably the embryos of these worms gain entrance to the body through the skin, most commonly the skin of the legs of persons who go about barefooted in an infested region. They make their way through the blood or lymph stream to the lungs and are discharged into the bronchi and swallowed. On reaching the intestines the worms hatch out, attach themselves to the intestinal wall and, once this has been accomplished, more or less constant bleeding occurs. Sometimes this is so severe as to result in death.

The disease is widespread in tropical and subtropical countries, but great progress has been made in recent years in curing thousands of victims of the disease.

There are oftentimes few symptoms in the stomach or bowels, but sometimes there is pain, indigestion or accumulation of gas, in addition to the anemia and resulting weakness. The remedies most commonly used to get rid of the worm are thymus or oil of chenopodium. These must be administered with care by a physician.

Bunions

To the Editor:—I am a woman 60 years old. I have a great deal of trouble with my feet. One of the worst is a bad bunion, which causes my big toe on the right foot to overlap the toe next to it. Would you advise an operation for the removal of this bunion and will you please describe the operation? Is the whole great toe removed to relieve the pressure on the other toes, or is this unnecessary? Would a general anesthetic be necessary, and would you advise an operation at my age, or "suffering it out" as I have done for years? I also have what is called fallen lateral arches. My toes do not touch the ground, only the ball of my feet, and this hurts also. As I have had this trouble for years, would it be too late for the usual exercises to do me any good?

C. B., McC., Texas.

Answer.—This common combination of bunion with retracted toes is frequently but erroneously called fallen anterior arch. The toe is not removed in the treatment of bunion, but an operation is performed at the base of the toe removing more or less bone from the head of the metatarsal bone that supports it until the toe can be placed straight. It is held then by dressings until healed.

The care of the bunion, however, is only a start in the severer cases in which the toes do not touch the ground. This is a distressing condition usually developed gradually by short shoes or disease of the muscles and nerves of the feet, the toes retracting and leaving the ball to do all the work. Once developed it is difficult to cure, most treatment being only palliative.

A properly fitting pad, preferably of felt, placed in the hollow just behind and close to the prominent bones of the ball will help carry the weight elsewhere and to that extent will relieve the weight on the ball and thus the distress. In the worst cases surgical operations for removal of the heads of the metatarsal bones have afforded distinct relief.

Gum Chewing vs. Sore Eyes

To the Editor:—I heard a lecturer say that some scientists or doctors had investigated the cause of sore eyes among Chicago children and they found that gum chewing tired the optic nerve and caused eye trouble. What information have you about this?

F. A. D., Kansas.

Answer.—There is no connection between sore eyes and the habit of chewing gum.

Keloid Following Operation

To the Editor:—Our baby girl was born with a birth mark (angioma) on her face. At 7 months a treatment with radium resulted in a burn with a number of scabs. Radium and carbon dioxide snow failed to remove the growth and at 11 months it was removed surgically. A keloid formed along the scar. At 21 months, a second operation was done to remove the keloid scar and a small remnant of the birth mark. Again a keloid formed, and now at 28 months it is quite extensive. Would another operation to remove the keloid be advisable? Is it dangerous to use x-rays on such a young child? Is there anything else that can be done to get rid of the keloid?

H. B., Missouri.

Answer.—Surgical removal of keloids is only occasionally successful. If the removal is immediately followed by treatment with x-rays or radium the result is commonly good. In large keloids this procedure is recommended; in small ones x-rays or radium alone is sufficient.

It is not dangerous properly to use x-rays on a keloid. There is no other treatment that offers much hope.

Swollen Ankles During Pregnancy

To the Editor:—Could you tell me what causes swollen ankles during the later months of pregnancy? Is it a serious matter?

J. E. H., Michigan.

Answer.—Swelling of the ankles during pregnancy is frequently an indication of a serious condition, though not always. It may indicate a disease of the kidneys, or may result merely from pressure on the blood vessels in the pelvis.

A pregnant woman whose ankles are swollen should always consult a good physician promptly and have him advise her at suitable intervals during her pregnancy.

Umbilical Hernia

To the Editor:—Please tell me whether a hernia develops while the child is coming into the world, or whether it is formed because the child did not fully develop and the lining of his stomach did not grow together. I have a baby 4 months old who has a bad rupture. When he cries the rupture is about the size of a large egg.

N. L. W., Massachusetts.

Answer.—The child probably has what is known as an umbilical hernia. This is the result of a defect of development. The umbilical cord, by which the baby in the uterus is attached to the placenta and through which he receives his nourishment, enters the infant's body at the navel. At the time of birth when the cord is tied, the structures close about the opening, usually with sufficient firmness to prevent the protrusion of any of the contents of the abdomen.

When, however, this closure is not complete and firm, a protrusion occurs, forming a swelling of varying size. This is usually more prominent when the baby is sitting up or when he coughs or cries. If a suitable pad is placed over the swelling and the parts drawn together with adhesive plaster, in a majority of cases this opening closes in a few weeks or months. Sometimes operation is necessary when closure fails to occur.

Parkinson's Disease

To the Editor:—I have Parkinson's disease in the early stage and should like to know if there is any known cure or any treatment that will delay its progress.

R. S. H., Montana.

Answer.—If the patient is suffering from true Parkinson's disease (paralysis agitans) and not from postencephalitic parkinsonism, there is nothing new to be offered in the way of treatment. A preparation of hyoscin is about the only medicine that will in any way modify the rigidity and the tremor. It must be prescribed by a physician, who will determine the dose needed and the frequency of administration.

Tuberculosis of the Bone

To the Editor:—Is tuberculosis of the bone ever entirely cured? In the case of a man who had had a broken hip, improperly cared for, which developed into tuberculosis, and after years of treatment is apparently well again, would the disease be likely to appear again? The man is doing outdoor work, swims, dances, does scout work, and except for an occasional pain and a slight shortness of one leg seems well. Would it be wise for such a man to marry? Would this trouble be likely to interfere with his having children? Would it be safe to have them?

S. B., Georgia.

Answer.—Tuberculosis of the bone is apparently cured in many instances, the process subsiding and not recurring. Its development in a broken hip is a rare occurrence, but it does not preclude healing, as has been actually demonstrated in this case. As to the possibility of its recurrence, a tuberculous infection is always a liability.

There appears to be no reason why a person recovered so far as the one in question should not marry and have healthy children. An examination by a competent surgeon with x-ray views of the hip should safely determine the course to pursue.

Dick Test

To the Editor:—How long does the Dick test make one immune to scarlet fever? How many treatments are usually given? Do you advise the Dick test?

M. M. L., Wyoming.

Answer.—It is not possible to say how long the immunity conferred by the vaccination against scarlet fever continues. Usually from three to five inoculations are given at intervals of from five to seven days, and after six or eight weeks the patient is given the Dick test. If the test shows the person still to be susceptible the prophylactic injections are repeated.

By the Dick test is meant the introduction into the skin of a minute quantity of the toxin of scarlet fever to determine whether the person has an immunity to the disease or is susceptible.

It is entirely warrantable to use this test at any time. The Dick serum (scarlet fever antitoxin) is used both for prophylactic purposes, that is, to protect the child from becoming infected, and as a curative measure to arrest the disease or to modify its severity when scarlet fever is actually present.

Some difference of opinion exists as to when prophylactic injections of serum should be used. The protection following injections of scarlet fever antitoxin is at best transient, lasting but a few weeks, and should not be given except when intimate contact with scarlet fever makes infection quite probable. Perhaps the majority of physicians would agree that it is not warrantable to urge its universal use among children, but that at times when scarlet fever appears in a community the children should be tested as to their susceptibility to scarlet fever and those who are susceptible should be given prophylactic inoculations of toxin, or vaccination.

Hand Lotion

To the Editor:—What is a good hand lotion?

B. A. C., Ohio.

Answer.—Persons differ in the matter of the behavior of the skin to different materials. For many a simple mixture of glycerin and water, or rosewater, answers well; others find a greasy preparation better, especially if the hands are inclined to chap in cold weather.